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SEX ANTAGONISM

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BY

WALTER HEAPE, M.A., F.R.S.

SECOND IMPRESSION

LONDON

CONSTABLE AND COMPANY LTD.

1913

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SEX ANTAGONISM

I

INTRODUCTORY

THE condition of unrest which permeates society to-day is apparent to all thoughtful men and women in every civilised country. Discontent in one form or another is rife amongst us, and daily it becomes more evident that, in some instances, what has for long smouldered as a grievance cannot any longer be restrained from bursting out into active antagonism.

The origin of this universal unrest may be traced broadly to three sources, Racial antagonism, Class antagonism, and Sex antagonism. In every country one or other of these three forms of discontent is prominently exhibited. In our own country, partly because of our great possessions, the first is a cause for continual anxiety, though long experience is apt unduly to dull popular apprehension in that direction. The second has ever been common with us as it has been with all civilised peoples ; the fact is generally recognised, and although drastic change in the relation of class to class seems once more imminent, changes of this kind are no new thing,

and we may have confidence that so long as the people of a country are patriotic, class readjustment is not necessarily a national evil but rather a sign of the vigour of a people. It is the exhibition of ignorant selfishness or gross brutality by a few individuals most directly concerned in some particular class battle, the incitement to violence preached by fanatics and charlatans, and a general tendency to disregard the law, which causes the timid to fear; but such phenomena are incident to all wars, and it is a class war we are experiencing.

The third cause of unrest is a very different matter. Sex antagonism is a family war, and as family strife leads to the most bitter of all quarrels so this war threatens to lead to enmity which may last for many years and work untold evil on the nation. For that reason it is, in my opinion, the most fateful of all the three forms of antagonism I have mentioned, and the inherent differences which exist in the character, sympathies, aims, and methods of the combatants cannot fail to lead to cruel misunderstandings and virulent recriminations which the moderate party on either side will find impossible to explain or restrain.

To most of us a sex war appears to be an entirely new experience. For fifty years we may have noted the gradual growth of opinions which have led to a more or less indefinite alteration in the tone of the sexes to each other; for the last twenty-five years

we may have recognised just cause for that alteration and some of the advantages to be derived from it; but of late we have been face to face with strife as selfish, as brutal, as bitter, and as unrestrained as that shown in any class war between men alone, and man's opinion of woman has been definitely modified—his attitude towards her as an integral component of society can never be the same again. Many older men view this fact as nothing less than a calamity; they are doubtless 'getting old.' It is possible however that future generations of women may derive benefit from a readjustment of sex relations. But in spite of the many reasons given by women for hope that such benefit will accrue, nay, for certainty that it will accrue somewhere along the line they have adopted if not at the end of it, those of us who are familiar with the working of natural law must find reason to doubt the soundness of the ground on which such confident belief is founded, and may even perhaps expect that this 'awakening of woman,' as it is called, will lead to a very different result from that anticipated by those who have sought to rouse her.

The differentiation of living matter into Male and Female was one of the earliest products of biological law, and the advent of the laws which govern and compel the functions of the Male and of the Female are comparatively but little subsequent in time to the first principles of life. Environment may influence the ease with which these functions may be discharged, but failure by either sex to discharge

them must lead to drastic derangement of all the other functions of the body of a bisexual species, and ultimately to its death as such.

It is the fashion to talk glibly of the need for the suppression of brutal sexual instincts, of the control of sexual passion, and so forth. Such demands are made by woman and addressed to man as a perverted creature, as an abnormal product of civilisation. The fact is that woman's sexuality is on quite a different plane to that of man ; she is wholly ignorant as a rule of man's normal requirements, and her virtuous demands, essentially designed for her own benefit as she conceives, are opposed to natural law. But she does not even stop there ; she is apt to inveigh against her own disabilities to live the life she clamours for, and to regard with disgust and contempt any reference to the physiological laws which inexorably govern the whole matter : no human being can escape from the results of infringement of the biological laws of sex, and those women who demand to be released from the iron fetters of Nature are no wiser than children who cry for the moon. The utmost that human law can do is to regulate the external relations of the sexes ; but all human laws promulgated for this purpose must, if they are to remain stable, conform to biological law, and no regulations of the external relations of the sexes which interfere with the discharge of the functions inherent to sex, or with the conditions necessary for the natural healthy performance of these functions, can last. This is a

principle of life, and every experiment made in antagonism to this principle must end in disaster.

When it is remembered that the digestive system and the reproductive system are the two most primitive of all systems of organs, it seems remarkable that so little attention has been paid to the latter ; but so it is, and many of the complicated phenomena incident to reproduction in the human species, amongst which a foremost place must be given to sexual phenomena, are recognised by few persons and understood by none. The reason for this neglect by science in modern times is probably to be sought in the persistence of the puritanical spirit which condemned all lusts of the flesh and branded those who referred in any other way to them : but I think the original cause of ignorance was chiefly due to the mysticism which has always enveloped the woman during the whole course of her progress from puberty to maternity, and this cause still exists to a very large extent.

This mysticism has ever been indulgently encouraged by women themselves ; in it they have wrapped themselves ; by means of it they have kept themselves, during the most critical stage of their existence, isolated from men as a sex ; and for the sake of it they find reason willingly to sacrifice many privileges of a different kind which they would otherwise gain from man. Woman is more calculating than man and probably has good reason for such sacrifice ; the bride, wife, and mother does not only thus gain man's reverence but, largely by this means, she

consolidates her independence during a particular, most important phase of her life; and, moreover, she ensures possession of undisputed sway over her babes. For such ends a wife, a prospective mother, will gladly sacrifice much which a confirmed spinster will never cease to covet; these two classes of women have in fact quite different aims in life, and I am disposed to think it is not improbable this difference will prove to be a source of very serious disagreement between them in all sex battles. Privileges which the spinster most desires the wife is indifferent to, and concessions to the sex which would be a gain to the former would prejudice the interests of the latter. Truly, if the woman's question begins with inter-, it is likely to end in intra-sexual strife.

During the last few years some of us have turned our attention to investigations which bear on the subject of reproduction. My own work has led me far afield, and from examination of the physiology of reproduction in the lower animals I have been brought to the threshold of that maze where the many separate impulses which are inextricably woven in the human sexual fabric, lie hidden. It is, indeed, little enough that I know, but I have perhaps learnt something of the nature of that fabric, a little of the origin of some of its threads and of the effect of the impulses they represent. The great difficulty for a man is to understand the woman's impulses and their effect on her actions, the woman's needs and the nature of the difficulties such neces-

sities create ; clearly it is essential these facts must be known in order to treat fairly a bisexual subject. These things are not set forth in scientific books in adequate fashion. Fiction, it is true, deals with them, and something may thereby be learnt ; but I have not been content with knowledge so gained and have gone for data to women themselves, from many of whom I have gained much of great value.

The subject is of profound interest and it is not to be wondered at that the present sex war absorbs much attention. But, so far as I am concerned, it is not so much the existing condition of unrest as the general trend of women's aims and sympathies which arrest me. It is not, for instance, the fact that at a meeting of the Conservative and Unionist Women's Franchise Association, held at Knightsbridge on 9th July 1912, a proposal was ratified by acclamation that, in future, suffragists 'should boycott anti-suffragists, should refuse to receive them or to shake hands with them,' which fills me with apprehension—such methods of warfare are not worthy of a moment's notice ; it is the fact that the utterances of those who are leaders of the movement constantly demonstrate that the depth of feeling which animates sensible women is grounded on fallacies, that they are ignorant of the real forces which are driving them, ignorant of the nature of the problem they are seeking to solve ; and, as many of them do not hesitate to influence young girls, even school-girls, the evil thus spread abroad is

likely to grow with great rapidity, while the teachers themselves pay no thought to the responsibility they are incurring.

After all, it is ignorance which is the greatest of dangers to the individual and to the State, and it is ignorance one seeks to combat: if possible I would show a cause for the origin of this rancour, the nature of the devil which is driving his ignorant victims.

In this connection many facts contained in Dr. Frazer's book on *Totemism and Exogamy*, dealing with primitive man, are of very great interest, for, if the interpretation I put upon them is correct, they demonstrate that sexual antagonism in the earliest days was little, if at all, different from what we are now experiencing; that in those days sexual unrest was a constant condition of developing society, and that the Female Element became sometimes more, sometimes less, dominant then, just as it has done in ancient historic times, just as it does now. We have, indeed, in Dr. Frazer's volumes a picture of the primitive savage woman striving for more privilege and of the more or less complacent Male blocking up the door. This complacency of the Male, by the way, strikes me as a characteristic of his sex; it is typical of his attitude towards Female struggles for supremacy even when presented by her with some ferocity; and it would also seem clear that when he accepts the situation and embraces the Female schemes, as he not infrequently does, he invariably plans and finally assumes

the direction of the laws which result. Thus, while there is reason to think that the Female among these primitive savages is responsible for the initiation of some of the most important advances in social development, there is equally strong reason to believe that the actual realisation of her ideas is the work of the Male.

Another point which is strikingly shown in Dr. Frazer's book is the effect of environment on Male and Female sexual dominance. An examination of the conditions of society amongst the most primitive savages of Central Australia shows that where, owing to the environment, life is extraordinarily hard, and the work necessary in order to live very strenuous, Male dominance is marked ; further north, under more generous environmental conditions, where the life may be conveniently compared with that of our lower middle classes, the dominance of sex regulations which have their origin in Female ideas is marked, and woman herself probably occupies the strongest position she ever attains as a sex amongst these people ; while still further north, where the environment ensures luxurious living, the dominant character of the Female wanes, and the Male element in society again asserts itself.

The redundant sexual vigour of the Male is here plainly shown to be greater than that of the Female, since he asserts himself where life is hardest, and he suffers least from the enervating effects of luxury. The Female, on the other hand, is at her best when hardship is removed and the effects of luxury are not

imposed upon her. In other words, the Female is at her best when in full breeding vigour, when the strain of maternity is not increased by hardship, and when the activity of the reproductive organs is not allayed by luxury. On the other hand, the sexual activity of the Male is not necessarily diminished by luxury—under some conditions it is markedly increased—while hardship does not affect his sexual instincts and capacities to anything like the same extent that it affects the woman's capacity to recoup from the strain of pregnancy and a long nursing period.

There is surprising similarity between the facts included in this generalisation and the conditions which prevail at similarly different periods in the history of modern races, and they compare also broadly with the conditions to be found now in various sections of our own people—the poor, the moderately well off, and those who live in luxurious surroundings. Indeed, I am convinced that environment exerts an enormous influence on the sexual problems of the day. I doubt very much whether its power can be overestimated, and I am prepared to assert that a drastic alteration in our present environmental conditions would entirely alter the whole aspect of the sexual antagonism which exists amongst us.

These conclusions obviously bear upon the conduct of the present sex war; they indicate that a more detailed discussion of the subject may serve to throw new light upon what is surely developing into

a serious family quarrel, and help towards a truer conception of the cause of the differences which exist.

If such an end could be achieved I venture to think it would prove to be of some considerable value; but no one who has not had opportunity to examine the question from the point of view which I have indicated, can be expected to accept my interpretations, and I have therefore undertaken in the following pages to present a criticism of Dr. Frazer's volumes with the hope that I may succeed in making my argument clear and at the same time pave the way for a further examination of the natural forces which govern the trend of action of the dissatisfied, or perhaps one may more accurately describe her as the unsatisfied modern woman.

This further task will prove an onerous one, but there can be no question of its importance because many deny that the unrest among women is affected in any way by biological law. A variety of arguments are used to prove that it is purely a social question; some urge that violation of economic principles is at the root of the matter; others, again, care nothing for social or economic laws and base their demands on what they conceive to be the rights of women to be placed on an equality with men, whatever that may mean. For my part I do not deny that economic and social laws are intimately concerned in the problem, indeed I maintain they urgently need revision; but I claim that it is primarily a biological problem we are dealing with,

that the violation of physiological principles has long preceded that of economic law, and that existing conditions cannot be clearly understood and satisfactorily dealt with until this fact is clearly recognised.

As for the demand for 'equality,' I conceive that no principle has been more consistently abused by man; there is absolutely no justification for the use of that word in connection with any matter which concerns the relation of the sexes. The basis for such relation must be founded on the laws of Nature, and equality does not exist in Nature, it is purely a mathematical conception, and to imagine that complementary parts of a whole are or can be equal in Nature is to imagine an absurdity. Clearly great confusion exists regarding the whole matter, and in the process of 'tinkering,' the application of which I judge is imminent, we are likely to commit grave errors.

But neglect of biological laws is not confined to social reformers; they are commonly ignored by the majority of those who concern themselves with human institutions. The theories Dr. Frazer advances in his book appear to me to be incompatible with such knowledge as we possess of generative physiology, and it was this fact which originally induced me to undertake the task of criticising them. In the course of the work it became more and more obvious that the two primitive customs of which he treats, while complementary to one another in practice, are in some ways essentially

antagonistic the one to the other. I sought, therefore, for means to determine the origin of that antagonism and for the reason why two opposing forces should be so intimately woven together.

The existence of sex antagonism *per se* is sufficiently accounted for by the fact that the Male and Female are differently organised, and that Nature has set them different tasks to perform in conjunction with one another. But it is obvious that, given a satisfactory environment, if the Male and Female concerned themselves only with the duties Nature has determined for them, sex antagonism would be latent. Why, then, should it be called into activity ?

If one sex, for some reason or other, did not perform its duty, or because one sex required facilities to enable it to perform its duty which interfered with the convenience of the other sex, antagonism between them would be stimulated. Changes of environment would account for such variation in the balance of sexual factors, for each sex is differently constituted and any change would affect each differently ; it is for this reason that sex relations must be continually changed in accordance with change of environment, if sex antagonism is to be avoided ; that is to say, there is no possibility of elaborating any fixed, permanent law regarding sex relationship in any society. Then we must consider the accession of human will power ; and immediately it appears that the introduction of desire, whether it be for the gratification of increased in-

stinctive needs of one sex, or of increased facilities to perform the natural duties of one sex, at once supplies the stimulus which calls forth sex antagonism. It was along these lines, then, that the solution of the problem must be sought.

In the first place, I was struck with the fact that the Central Australian natives and the Banks' Islanders—amongst the latter of whom Dr. Frazer finds the most primitive form of totemism, while he considers the former to be the most primitive savages now living—come under the class which Westermarck declares are, with few exceptions, monogamous (*History of Human Marriage*, chaps. xx.-xxii.); and on comparing monogamous with polygamous peoples, it seemed to me that sex antagonism was more marked in the former, that is, where a mate is specially selected and where a couple live in community with other couples. This was no more than a general idea; it is, I think, supported by what is known of the attitude of women in civilised polygamous countries, but so many other factors are there brought in that I attach no importance to the comparison. It may perhaps be claimed that polygamy amongst savage people is associated with a minimum of sex antagonism. I am disposed to think it probably is so, but I have not sufficient knowledge to be assured of the fact; and in any case the difference, if it existed, would only be relative.

Examination of what is known of sex relations in this respect among the lower animals afforded me

little help. Where pairing takes place, the pairs very usually live an isolated life, though many birds are an exception to the rule. It is true that in polygamous mammals which live in herds the Female appears to be under complete subjection, whereas there are perhaps indications of more assertiveness on her part when paired; but I know of little evidence which bears conclusively on the point. An obvious indication of sex antagonism in animals is, I think, afforded by the exhibition of the mother's fierce protection of her young against the father; the need for such protection is evidence of sex antagonism, but it is a crude example and I imagine it is only rarely called for.

The clue was given to me by discovery of the fact that the habit of exogamy must certainly have been derived from the natural desire of the Male to seek for his mate outside his own family or clan; while totemism, in so far as it is a more or less elaborate system of restricting the wanderings of the errant Male, was probably derived from the opposite sex, since the Male could have nothing directly obvious to gain by any limitation of his power to satisfy his desires.

I found no indication that Dr. Frazer himself shared this view of the origin of exogamy, but I did find that he associated the origin of totemism essentially with the Feminine mind.

If I am right, then here is a primary cause for sex antagonism. Exogamy being the product of the Male instincts, and the origin of totemism being

associated with Female instincts, any difficulty in understanding why these two customs should be complementary is at once dissipated. In the same way the antagonistic nature of the two customs is also fully comprehensible, for the Male sexual instincts and the Male sexual requirements are quite different from those of the Female ; and where the sexes live together in community, even where the most elementary form of society exists, such differences will be exaggerated, the members of each sex will combine, and sex antagonism will result.

I have already indicated how environment may modify sexual and reproductive activity in the two sexes, and it is clear that the physiological laws governing these functions will ensure antagonism between two sections of a community which, while necessarily complementary, are by nature endowed with entirely different inducements or requirements for the efficient discharge of those functions. The same difference in the sexual requirements of the Male and Female is constantly seen among animals which herd together and have not separate abodes, and is a marked characteristic of domesticated animals, whether they are descended from stock which pair in the wild state or not. One of the first effects of domestication is to stimulate the sexual and reproductive activity of both Male and Female, but, since the gratification of sexual desire by the Female is normally followed by a prolonged period of gestation during which her sexual activity is usually in abeyance, whereas the Male experiences

no such check to his sexual capacities, it is obvious that the Male and Female are not comparable in this respect.

That civilisation has a similar effect on the human Male and Female is indisputable; even civilisation in its most primitive form must do so, and it may be accepted as a law, that among normal vigorous men and women neither their natural sexual passions nor the exercise of their reproductive functions in accordance with physiological law, is in any way comparable. Given these conditions of environment such as I have already referred to—such as domestication or civilisation—which accentuate this difference, it is not to be wondered at that monogamous people experience grave inconvenience, and that the sexes constantly find themselves in antagonism.

The laws made by savages to meet this difficulty are certainly modified by more civilised peoples, but the principle involved is the same in both. Sex laws appear undoubtedly to have arisen in the Female mind and to have been adopted by the Male with such modifications as his natural instincts require from time to time. In the same way the civilised Male, like his savage ancestor, has always found some means or other to enable him to find relief from the increased pressure his turbulent nature experiences in consequence of the stricter laws which more complicated social obligations impose upon him. Again, the methods adopted may be different but the principle involved is the same, and so long

as we are governed by natural law it will remain the same, and it cannot be ignored.

I should here add that I am in no way qualified to judge whether Dr. Frazer's view regarding the origin of totemism is based on solid ground or not. I understand that a great variety of suggestions have been made to account for the custom, some of which are diametrically opposed to the premises on which he founds his theory ; as, for instance, the suggestion that totemism is nothing more than a development of the practice of taboo. The discussion of such matters I must leave. But Dr. Frazer's suggestion is very attractive to a biologist, because it imports into the life of the most primitive of peoples, views of the working of the most elementary instincts and impulses of sex. And if exogamy can also be shown to be derived from the same class of elementary instinct, then we have, laid out before us, some few more threads of the web which connects human with animal instinct and modern custom with primitive human impulse. Obviously these threads are of special attraction to the student of generative physiology ; to such a one many reflections occur which strongly support Dr. Frazer's theory ; and, believing as I do that the generative system demands toll of every other organ of the body, while the instincts and impulses of sex have always been the most powerful factors in the ordering of social life, there appears to me strong reason for anticipation that it will be found that these forces do influence all primitive customs. It cannot be a

matter of surprise, therefore, that to such a one the vista so opened up is attractive, and also that one finds much evidence in support of the view, that to sex antagonism these savages owe, as we do, some of the most important of all social developments.

II

THE PROBLEMS

DR. FRAZER'S encyclopædic work on *Totemism and Exogamy* (1911) is a monument of wonderfully patient research, of masterly marshalling of evidence, of transparent fairness of criticism and of acute reasoning. It is impossible for one who is a mere biologist to offer criticism of such a work without recognising the danger of falling into many errors, and of stumbling into pitfalls which only a trained anthropologist can avoid. It is, however, precisely as a biologist, and with full recognition of the dangers ahead, that I venture to present certain aspects of the problems he has set forth which, so far as I know, have not been definitely expressed.

I am prompted by two reasons: in the first place, as I have already stated, the origin and the subsequent association of these two primitive customs as set forth by Dr. Frazer, appear to me to indicate that they afford evidence of the working of an elemental war of the sexes which, both for biological and for social reasons, is of great interest at this stage of our own history. In the second place, I am impelled to doubt certain of the conclusions Dr. Frazer has drawn. I feel that he has

somewhat unduly neglected the biological aspect of the problem ; that in discussing the origin of savage customs which he maintains are of such vast antiquity, he has overlooked the effect of that crude physiological impulse which, in view of the power it exerts to-day upon us, we may reasonably conclude must have exerted much greater influence long ages ago on the actions of those whose descendants are still savages ; while he has demanded too much exertion of that human ' intelligence, deliberation and will ' which is essential for the theory he advances.

If, therefore, my criticisms are just, some doubt must be thrown on Dr. Frazer's conclusions ; I do not suggest that solutions of the chief problems are here afforded, but I think it is possible some light may incidentally be thrown upon them which will help towards a clearer idea of their essential nature. It is this end which my friend Dr. Frazer has at heart and it is this which every one who knows him must be assured is the sole aim of his great labour, so I am cheered by the knowledge that whatever errors I may fall into will meet with the generous criticism he never fails to accord to all who, with this aim in view, thrust themselves across his track. And indeed I am justified in this hope, for already he has supplied me with frank criticism of certain points advanced in a preliminary draft of a portion of this work which I submitted to him, and has set me at liberty, indeed has requested me to make full use of the notes and letter he has

written. This I shall gladly do in the following pages, and, in order to differentiate between quotations from his book and from these papers, shall refer to the latter as MS.

In considering the problem in the aspect from which I propose to present it, it is necessary to bear in mind the biological constitution of the society dealt with ; and this, it seems to me, is very generally neglected.

In the first place, I am struck with the fact that while all societies are compounded of two fundamentally different elements, the power and the effect of only one of these elements is, as a rule, seriously considered by anthropologists. The vast majority of anthropologists are men, and men are notoriously incapable of analysing the Female mind. But societies are compounded of Males and Females, and it seems to me very questionable whether anthropologists are not sometimes, perhaps frequently, entirely mistaken in their interpretation of facts which have their origin in, or bear upon, the habits, customs and beliefs of a society in which the Female element is a powerful factor. Thus, in dealing with any social problem we must not only consider the Male, for we are dealing also with the Female, mind ; and no matter how primitive the society may be, this Female aspect of the subject, these Female feelings, these Female interpretations of cause and effect exist, exert drastic influence, and must not be ignored.

If there is one thing more than another empha-

sised by the study of reproductive physiology it is the essential differences between the Male and the Female. The reproductive system is one of the two most primitive systems of organs possessed by all living things. The digestive system is necessary for the life of the individual, the reproductive for the life of the species, and all the other systems of organs—excretory, vascular, nervous, muscular, skeletal, sensory—are called forth and built up in accordance with the needs which arise for the more efficient discharge of both these two primitive systems. But, and this is of great moment, one of these two primitive systems, the reproductive, is not only structurally but functionally, fundamentally different in the Male and in the Female ; and since all other organs and systems of organs are affected by this system, it is certain that the Male and Female are essentially different throughout. Some of these differences are glaring and forceful, others infinitely subtle, hidden differences, and the most remarkable are not due to structural differences but to profound divergence of function. The origin of them all is to be traced without doubt to the overwhelming influence, either of the forces which induce the activity of the reproductive system, or to the products of that activity ; it is by such means that all the tissues of the body are bound together and drilled subservient to sex.

What these forces are is a problem with which I have long concerned myself, but this is not the place, and indeed I am not prepared now, to discuss

it. It is enough perhaps to say that, so far as I understand the matter, the origin of the stimulus is the same for both sexes, but its effect is very differently expressed in the Male and in the Female of all animals ; and further, that such difference is wholly due to difference of function in the two sexes. I feel very sure that the effect of this profound divergence of function is greatly underrated as a rule, and that neglect to recognise it frankly must result in disastrous consequences both to savage and to civilised communities alike.

Sometimes the bare fact that the Female mind contributes to primitive beliefs and helps to shape the customs and laws of a people, is clearly admitted. Thus Dr. Frazer writes (vol. iv. p. 64) : ‘ If we ask what in particular may have suggested the theory of conception which appears to be the tap-root of totemism, it seems probable that, as I have already indicated, a preponderant influence is to be ascribed to the sick fancies of pregnant women, and that so far, therefore, totemism may be described as a creation of the feminine rather than of the masculine mind ’ ; and again he remarks (p. 63), certain ‘ maternal fancies appear to be the root of totemism.’ Dr. Frazer is, I believe, the only one who has ever drawn attention to the effect of Female influence in this connection, and in my opinion it is a very important generalisation.

It is perhaps true that the effect of these forceful sex influences is specially marked in the Male during the breeding season, in the Female during preg-

nancy. ' Maternal fancies ' are undoubtedly strong. But it must be clearly recognised that the difference between the sexes is not confined to these brief periods, it is a constant, inherent difference, and, as we advance in the scale of organisation, will probably be found to be always acting with greater force, as a wedge driven ever deeper by social necessities and laws, and separating the essential nature of the two sexes further and further apart.

To speak of this difference between the sexes is to talk of a fact so self-evident that it will seem to many quite unnecessary to draw attention to it, but I feel very sure that, so far as the woman is concerned, such evidence as is usually deemed sufficient for the purpose is but gleaned from the most superficial layer of an infinitely complicated hidden structure, of the constitution of which we, as men, are profoundly ignorant. Moreover, it seems certain that the actual influence of the woman is in direct proportion to the secrecy with which her characteristic differences are guarded, the less they are recognised the greater is their power. Patent facts are easy to reckon with ; it is the unknown which disturbs all one's calculations.

Such differences are not confined to civilised peoples, they are represented in the lowest savages. Civilisation has no doubt given rise to more delicate shades of divergence, but the main functions of the one sex are equally opposed to those of the other sex in all animals ; and it is these main functions, these inherent differences, which are responsible

for an enormous proportion of the misunderstandings common between men and women ; responsible for the disregard the Male constantly shows for the Female, for the antagonism evinced by the Female towards the Male. Such disregard and antagonism is not necessarily wilful, it is inherent, and I am convinced is, as a rule, but vaguely recognised by the offender.

As an example ;—A girl of fourteen years was asked what she would like best in the world, and she replied in the most natural manner, she would like to marry and have four children, then she would like her husband to die and she would bring up her family. This is a striking instance of the inherent Feminine attitude towards the Male before love is introduced. Once the children are produced, the mother desires freedom to bring them up. The Male is no longer desired by her when once the productive stage of her life is over ; he then occupies only a subordinate place in her life work, and is, in fact, from a sexual point of view, only a nuisance to the woman when that time comes. Such a feeling is constantly to be found in women, though they themselves often do not recognise the force which is driving them ; they only have a feeling which, as a rule, they are ashamed to confess, but it is actually the same feeling which this girl, speaking of her natural instinctive desires, thus plainly expressed.

At the same primitive stage of civilisation the Male will look upon a woman primarily from a sexual point of view, secondarily, no doubt, as a worker for

his benefit ; and when, either temporarily or permanently, she fails to attract him sexually, he will look around for another woman to take her place. Such instinctive desires are a quality of the sex. I refer here, of course, to passion as distinct from love. But my view does not demand that savages are devoid of affection ; love for one woman is not destroyed by passion for another ; society may declare that constancy is the sole gauge of love, but love is naturally distinct from passion ; it is only in accordance with social laws that the two are merged together.

Thus it is not only the Feminine mind which is different from the Male mind ; it is the whole Female organisation, her inclinations, feelings, and intuitions which are different. It is the woman's biological necessities, and all the various forces which conduce to their satisfaction, which, though complementary to those of the man for a period in their joint lives, are quite different from, and eventually become diametrically opposed to, his needs and to the natural forces which drive him.

I venture to think Dr. Frazer has not sufficiently considered this aspect of the problem, and, if I mistake not, it lies at the root of both exogamy and totemism. As a man I cannot hope to define the subtle Female differences which tend to thrust the sexes apart, but as a biologist I think it may be possible to indicate certain directions in which that power is evinced, even, perhaps, certain cumulative results thereof.

It is such reflections which impel me to think the biological aspect of various anthropological problems is often insufficiently considered. Dr. Frazer appears to hold a different view. He remarks on 'a weakness which has of late years vitiated other speculations as to the growth of human institutions. It attempts to explain that growth too exclusively from physical and biological causes without taking into account the factors of intelligence, deliberation, and will.' Inquirers, he says, 'forget the part that human thought and will have played in moulding human destiny.' And again: 'In particular, the science which deals with human society will not, if it is truly scientific, omit to reckon with the qualities which distinguish man from the beasts' (vol. iv. p. 98). Now these remarks are surely applicable to the interpretation of the *development* of laws and customs which have proceeded in accordance with that intelligence, deliberation and will which is peculiar to man. But his strictures are directed specially in this place against one who has attempted to assign a biological reason for the *origin* of a custom, and that is a very different matter from its development. The custom in question is that of exogamy, and Dr. Frazer finds that certain tribes inhabiting Central and Northern Australia, the most primitive human beings living to day, 'practise exogamy in its most rigid form' and yet are 'still ignorant of the fact of physical paternity' (vol. iv. p. 99).

Now it is surely a very remarkable fact that such

primitive people, people who, Dr. Frazer believes, are so void of intelligence that they are ignorant of the result of sexual intercourse, should have stringent regulations against endogamy, elaborate rules regarding exogamous mating, unless this habit of exogamy had grown through vast ages, very slowly, bit by bit, until it has come to be 'exogamy in its most rigid form.' And if that is so, the custom must have arisen many ages ago, when these people were possessed of appreciably less power of 'intelligence, deliberation and will' than they now have, at a time, in fact, when they were governed by instinct in such matters, even as we are to-day in the same and in some others! 'The abhorrence of incest, which is the essence of exogamy,' he says, has grown through a long series of ages; 'there is no evidence or probability that the aversion is a thing of recent growth, a product of advanced civilisation,' while it is fair to suppose it has 'everywhere originated in the same primitive modes of thought and feeling' (vol. iv. p. 153).

But a people who, at the present time, have no domestic animals, who are ignorant that a seed if planted will grow, and live altogether on the products of their hunting skill, must, some thousands of years ago, have stood at the very dawn of human existence; and a custom so elaborate as the exogamy practised by these primitive savages must indeed have been of growth so slow that it is easier to believe it had its origin in instinct, that is, feeling, or an instinctive method of satisfying feeling, rather than

in any other quality more nearly approaching reason or thought.

If there is any probability in the truth of this suggestion of the origin of the custom, one cannot fail to look with great suspicion on the statement that the abhorrence of incest is the essence of exogamy. Such horror may quite possibly have subsequently come to be a factor which helped to consolidate the law, but, if the custom arose in accordance with instinct—and I believe I can advance evidence which makes that view highly probable—horror is not the essence of the matter, rather is it founded on a definite sexual instinct, inclination, or feeling.

Dr. Frazer's elaborate and ingenious arguments, advanced to show that it is possible that the 'intercourse of near kin was thought to render the women of the tribe sterile and to endanger the common food supply by preventing edible animals from multiplying and edible plants from growing; in short, that the effect of incest was supposed to be sterility of women, animals and plants', may, as he says, be 'an effect rather than the cause of its prohibition' (p. 157). But if so, on what grounds does he found his belief that abhorrence of incest is the essence of exogamy? Dr. Frazer is so imbued with the importance of the effect of human intelligence on the customs of a people that, in spite of the admitted antiquity of this habit, he wholly disregards the bearing of any other influence upon it. It seems clear to me that such belief in the evil resulting

from incest, where it exists, must be the effect of experience, since it can only have been learnt from experience, and such experience must be denied to those savages in Central Australia who practise exogamy while they do not recognise the consequence of sexual relationship.

Dr. Frazer, however, is apparently not prepared to accept such a view. He writes me (MS.) that he denies experience has anything to do with the matter, since the belief seems to be that the intercourse of near kin among human beings *ipso facto* sterilises animals and plants; and this, he says, is far from being a fact of experience, it is an absurdity, a mere superstition.

For my part, I do not recognise the relevance of such objection. If there is a belief that incest amongst human beings causes sterility in animals and plants it must be a superstition of secondary growth, it can have nothing to do with the main problem and it is, I think, an error to allow such adventitious matter to divert attention from the main question.

Incidentally one may remark that 'a mere superstition' is not perhaps so far removed from experience as Dr. Frazer seems inclined here to believe. A vast proportion of superstitions have their origin in an attempt to account for, to explain phenomena which are not understood; and no doubt the habits, customs, necessities, and experiences of a people influence the trend of thought which determines the character of a superstition. This very superstition

which Dr. Frazer calls an absurdity may indeed be so accounted for. At first sight it is not easy to imagine any cause for imagining connection between the fertility of the human members of a tribe and that of the wild animals which surround them ; but, as a matter of fact there is such cause for connecting the two phenomena, for those natural conditions which influence the fertility of a savage tribe affect also the breeding powers of the animals in their neighbourhood. This fact cannot have escaped the notice of the wise men of the tribe ; tradition will hand it down for it is of vital importance to them, it concerns the food supply. They do not understand the forces which so act on people, animals and plants alike, but they see clearly there is connection between them all, and they assume that the common result is due to some act of their own. There is, I imagine, no more common origin of superstitious belief than the conception that man is himself responsible for the results of natural law. Amongst peoples much more highly civilised than these savages the spirits of thunder, storm, and fever are supposed to work evil on a people because it is believed that their behaviour has in some way offended the spirits. Thus in the case quoted by Dr. Frazer, while the savage explanation of the fact is absurd the fact itself they have rightly learnt from experience, and so, if they believe that intercourse of near kin induces sterility amongst themselves, they may be considered logically entitled to believe it also affects the fertility of the animals and plants living around them.

To return to the main point, Dr. Frazer concludes (vol. iv. p. 160) regarding exogamy: 'Considering everything as carefully as I can I incline, though with great hesitancy and reserve, to think that exogamy may have sprung from a belief in the injurious and especially the sterilising effects of incest, not upon the persons who engage in it, at least not upon the man, nor upon the offspring, but upon women generally and particularly upon edible animals and plants.' In view of what is said before, this appears to me to be a very astonishing conclusion; but, Dr. Frazer adds, 'If that is not the origin of exogamy I must confess to being completely baffled, for I have no other conjecture to offer on the subject.'

In the following pages I will venture to suggest another explanation, not one which primarily concerns intelligence, deliberation and will, but one which has its origin in those natural biological laws which influence habits and customs long before connected thought is efficiently exercised. I cannot doubt it is to such an age, to such a primitive state of society, to such an elementary condition of human faculty we must revert in order to conceive of the forces which are responsible for the origin of such a custom.

Regarding totemism and Dr. Frazer's derivation of it from a primitive theory of conception which presupposes ignorance of the part played by the father in procreation; although I shall suggest another theory of the origin of the custom, my main

endeavour will be to show that ignorance of the result of sexual intercourse is not a primitive condition but is acquired by superstition, originating in the Female mind and accepted by the Male.

This custom appears to me to be the first evidence we have of the assertion of woman in society. It arose with her and results in part in raising her status in society; she becomes through its agency of much greater importance to the community, and the power she thereby acquires she never again wholly loses. At the same time it appears that any permanent influence she subsequently gains may be traced to the same source—which is essentially, reverence for the mysteries of maternity; and, so far as I am aware, on no matter wholly divorced from maternity and the rearing of the child has the woman ever succeeded in establishing herself permanently as of essential, of irreplaceable, value to society.

The treatment by the Male of this purely Female scheme is a circumstance of much interest. It demonstrates in a remarkable manner the fundamental difference in the natural characteristics of the Male and the Female; it shows how that difference results in the ready absorption of Female ideas by the Male; and it shows how his placid acceptance of the woman's claims is followed by his eventual assumption of control by means of laws which he formulates and administers.

There is one other matter to which I shall devote some attention, and that is the belief in the transmission to the unborn child of maternal impressions.

Dr. Frazer is disposed to attach some importance to this belief in connection with totemism, and the evidence I have to offer on the subject may be regarded as not unfavourable to such views. At the same time, as Dr. Frazer fully recognises, the fundamental question of the possible influence of a mother on her unborn child has not been definitely answered by biology, and I do not claim here to answer it.

III

EXOLOGY

THE essence of Dr. Frazer's argument regarding the 'origin of exogamy' is set forth in the first few pages of that section of the fourth volume which deals with the subject (p. 71). He quotes Donald McLennan, who remarks, writing of his brother J. F. McLennan's work, that it appears to him of primary importance to exhibit totemism 'in connection with kinship and with exogamy' (p. 73). Totemism, he was convinced, must have been established prior to the origin of exogamy, and is referable 'to a state of man in which no idea of incest existed' (p. 74).

W. Robertson Smith also believed that totemism was older than exogamy, and declared, 'it is easy to see that exogamy necessarily presupposes the existence of a system of kinship which took no account of degrees but only of participation in a common stock.' 'Such an idea as this', he adds, 'must have been thought under a concrete and tangible form, and that form seems to have been always supplied by totemism.'

Dr. Frazer remarks (p. 75): 'The course of subsequent research, which has immensely enlarged the

evidence for the practice of totemism and exogamy, has strongly confirmed the conclusion reached by these eminent scholars and thinkers as to the priority of totemism to exogamy. Any theory based on the assumption that the two things have from the first existed together as different sides of the same institution, or that totemism is derived from exogamy, is founded on misapprehension and can only end in confusion and error.' He adds: 'Exogamy was an innovation imposed on communities which were already divided into totemic clans'; and again: 'totemism existed in all its essential features before exogamy was thought of.'

Now, is Dr. Frazer really here treating of the *origin* of exogamy, the cause from which the habit arose, or of its social *development*? It appears to me he has confused the two.

He discusses the theories by means of which various investigators have attempted to explain the origin of exogamy: J. T. McLennan's views regarding the scarcity of women (p. 75), either on account of female infanticide (p. 77), or on account of the natural disproportion of the sexes (p. 83); of the mutual hostility of primitive groups of peoples and their readiness to carry off each other's women, that is, of a systematic capture of women (p. 87); Durkheim's ideas based on religious sentiment with regard to menstruous blood (p. 100); Westermarck's theory of the instinctive aversion to sexual intercourse between persons who have lived closely together from early youth, which he claims is a

result of natural selection (p. 93). And after careful consideration he dismisses them all as untenable.

On the other hand, Morgan's view that it is 'only explainable in its origin, as a reformatory movement to break up the intermarriage of blood relatives,' he says, furnishes 'the true key to the whole system of exogamy.' The essential part of Morgan's theory, he claims, has been greatly strengthened by knowledge since acquired of the social organisation of those very primitive savages the Australian aborigines; and asserts that it is to the customs of these tribes in 'Australia that we must look for a solution of the enigma' (pp. 104-5). On this matter he accepts without reserve, so far as I can see, Spencer and Gillen's account of their brilliant researches, and to a very large extent bases his conclusions thereon.

But in the wilds of Central Australia, what do we there find?—tribes of so savage, so ignorant a people that, we are told, they do not recognise the physical relation of fatherhood; a people who, in point of fact, still only recognise the value of cohabitation as a means for gratifying sexual passion. How then can the exogamy they practise, 'exogamy in its most rigid form', have its *origin* in a desire to break up the intermarriage of blood relatives? Apart from the relation of children to their mother, and of children of the same mother to one another, what do they know of blood relationship? What *reason* can they have for the strong aversion to consanguineous unions which the theory requires?

They do not even know the consequence of any union. A Casanova is not required to find excuse for incest between father and daughter among them.

However advantageous the habit of exogamy may have become for the prevention of incest, we must, I think, seek for another explanation of its origin.

It would appear that W. Robertson Smith certainly associated exogamy with totemism, since exogamy necessarily presupposes the existence of a system of kinship, a tangible form of thought which seems to have been always required by totemism.

Dr. Frazer bases his whole arguments on the fact that exogamy and totemism 'are fundamentally distinct in origin and nature' (vol. i. p. xii.). He 'proclaimed it loudly as a truth which has been generally overlooked' (MS.). In vol. iv. pp. 42-3 he remarks, 'we shall do well to bear in mind that both totemism and exogamy may possibly have originated in very different ways among different people,' though 'the presumption is certainly in favour of the view that each of them has everywhere originated in substantially the same way, and that therefore a theory which satisfactorily explains the origin of these institutions in any one race will probably explain its origin in all races'; while on p. 75 he records his belief in the priority of totemism, and his opinion that exogamy was imposed on communities which were already divided into totemic clans. Moreover (vol. i. p. 250), he

speaks of 'the exogamous totemic marriages of the Warramunga.'

Taken in conjunction with McLennan's view that totemism must have been established when no idea of incest existed, and with W. Robertson Smith's belief that exogamy could only have been thought of under conditions supplied by totemism, views with which I gather Dr. Frazer is in substantial agreement, (vol. iv. p. 159), his opinion that the origin of exogamy is founded on a horror of incest induces one to suppose that he thinks that exogamy arose from totemic conditions. At first sight, therefore, it might appear that in spite of his assertion regarding their distinct origin (*l.c.*), Dr. Frazer also associates the origin of exogamy with conditions which prevailed during a pre-existing totemism, and that its imposition on this much older elaborate system of totemic laws would entail its governance thereby. But apparently this is not so. I fell into such error, and Dr. Frazer writes me (MS.), with some considerable emphasis, that in his opinion totemism had nothing to do with the enacting of the custom of exogamy; that exogamy is not a totemic law; and I gather he believes that the prevention of 'cohabitation of blood relations, especially of brothers with sisters', the abolition of the worst features of promiscuous intercourse, furnishes the true key to the whole system of exogamy (pp. 104-5); and that these matters are in no way affected by totemic law, which originated in a primitive explanation of conception and child-birth.

I confess I find grave difficulty in reconciling Dr. Frazer's statements in this connection. I cannot conceive how a knowledge of incest can have arisen amongst these primitive people apart from totemism, apart from segregation into totemic clans and a system of kinship; and so, *if* exogamy is based on a knowledge of incest I fail to understand how it can be maintained that it has a separate origin from totemism.

I also desire to maintain that exogamy *has* a separate origin from totemism, but I hold that horror of incest has nothing whatever to do with the matter; while if Dr. Frazer is right in deriving exogamy from a horror of incest, I think he must be prepared to associate it with totemism.

That it becomes associated with totemism there is no doubt. Speaking of the Warramunga (vol. i. p. 250), he says: 'The exogamy of the totemic clans is thus a direct consequence of their local segregation in two separate areas'; and Dr. Frazer fully recognises the significance of such facts. He proclaims (vol. i. p. 257) there is evidence that while originally exogamy arose entirely independently of totemism and that the origin of each is distinct from the other, later totemism and exogamy became inseparably entangled so that you cannot consider the one adequately without the other.

But does his theory of the origin of exogamy admit of such a view? Has he sufficiently differentiated the evidence which bears on the origin of the custom? I think not. In order to show a separate origin for

these two customs exogamy must be demonstrated to have arisen prior to the conception of totemism, when 'no idea of incest existed,' it must be shown to be due to a natural law or to be a habit previously acquired.

I maintain that it is a natural law, and that as such it takes precedence of totemism, which is an invention of the Female mind. Later, no doubt, when the two became inseparably entangled, then it is reasonable to expect that totemic rules for mating would exercise some control over a natural instinctive habit, and to a variable extent control it. Broadly I think this is what has happened, and if so, such an example as is given of the Warramunga may be evidence of the use which has been made of the habit, and of the physiological laws which induced the habit; but, in view of the profound ignorance of these people of the result of cohabitation, exogamy could not have been established by such means had not the natural desire for it existed. Advantage has been taken of a natural instinct to superimpose upon it a human law. Totemism may be responsible for the latter and may be the origin thereof, but the natural instinct which gave rise to the habit of exogamous mating surely preceded totemism; moreover, as I will endeavour to show, without this instinct no such totemic law could have been promulgated by these ignorant people.

I am told by Dr. Frazer that the mind of these savages is of such low order that they are incapable of connecting events which are separated by a few

months' time ; that indeed this is one of the reasons, if not the main reason why they fail to associate cohabitation with the origin of a child ; and yet it appears they are capable of building up an elaborate system of laws founded on the desire to break up the intermarriage of blood relations ! I think it is abundantly clear that such aversion to incest cannot be ascribed to reason at all, can only have its *origin* in the natural laws which govern sexual desires ; it surely cannot be derived from any experience of the result of intermarriage of blood relations. It is difficult to conceive of a mental condition, however elementary, which can evolve laws wholly independent of recognised phenomena ; the phenomena may be misinterpreted, but they must be noted and, to some extent, however feebly, compared one with the other.

Now it is somewhat remarkable that all the investigators quoted, with the exception of Morgan, adduce evidence for the origin of the custom which, if true, points clearly to the fact that the stimulus which brought it about was derived from the Male. The scarcity of women, their capture, the religious sentiment regarding menstruous blood, and the instinctive aversion to sexual intercourse with those who have lived close together from youth ; are all based on this idea of Male supremacy. But although very suggestive from this point of view, they are not conclusive arguments, and Dr. Frazer, discarding the hints they give, will have none of them. Totemism, he admits, is a product of the

Feminine mind, but exogamy he does not apparently associate with either sex ; yet it is essentially a sex question and if, as seems clear, it cannot be associated with the result of sexual intercourse, with parentage, it must have relation to the sexual act itself ; that is to say, to sexual gratification and the stimulus which ensures it. It is no doubt true that both sexes share in the consummation of sexual gratification, but the necessary stimulus must primarily affect the Male and its intensity is determined by his susceptibilities. Exogamy is, for that reason, in opposition to totemism, a product of the Masculine mind. At the same time, in dealing with the origin of such a primitive habit, it must not be forgotten we are dealing with forces which actuate creatures of such low mental power that their mainspring of action is situated either in their digestive or in their reproductive system. In this case we have to do with the latter, and although we are concerned with creatures who are said to have no knowledge of the reproductive function, they certainly have experience of sexuality, which is the incentive to reproduction in all the lower animals.

At a later stage, where the habit develops into a custom, reason must be exercised ; but even here, in this instance, the power of reason is so low amongst these people that they are not yet credited with such knowledge of the function of the reproductive system as seems to me necessary in order to establish Dr. Frazer's view. Perhaps they are not credited with

so much intelligence as they actually possess, indeed Dr. Frazer's treatment of them in this respect is not a little confusing. On the one hand he speaks of them as the lowest of savages, without sufficient power of connected thought to correlate cohabitation with pregnancy; on the other, as a people who evolve laws which serve as a 'mental relief . . . to the scrupulous and superstitious but dull-witted savage' (vol. iv. p. 114). And again (p. 121) he speaks of 'the curious machinery which savage wit had devised for the preservation of sexual morality', and apparently assumes they were quite capable of appreciating 'general sentiments of what was right and proper'. One is inclined to think these latter quotations carry an impression of intellectual development, discrimination, and reserve which is hardly compatible with the powers of these lowest of savages. In view of what will follow regarding totemism, these remarks are not without purpose; but here perhaps they do not so much concern us, as it is with the origin of the habit we have to do.

From what has been already stated, it seems certain that, if Dr. Frazer is right in his view of exogamy, the inevitable conclusion is that these Central Australian natives must be a degenerate, not a primitive people. There is some support for this view, for Sollas in his *Ancient Hunters and their Modern Representatives* suggests that they are descended from inferior stocks of the Neanderthal race, driven out of Europe. But whatever

may have been their origin, if exogamy has been preceded by elaborate totemic laws, and if it is founded on a reasoned determination to prevent incest, then these people of such limited intelligence must be the remnants of a people possessed of much higher mental faculties, of a people who could exercise sufficient reason for the purpose. I think many of those who read Dr. Frazer's graphic pages must feel that his description of the savagery of these profoundly ignorant people is incompatible with the power of organisation and shrewd reasoning faculties necessary for the perfecting of the system of exogamy he describes; that is, if it be a very ancient social reformatory movement such as Morgan holds, the view which Dr. Frazer adopts. But it is quite clear that Dr. Frazer is convinced that these tribes are not a degenerate but a truly primitive people; and if this be true, then, if I am right in what has gone before, if the habit of exogamy arose in consequence of natural biological laws, was induced by the primitive sexual stimulus which alone can be believed to influence their sexual desires, in that case it is certainly due to the initiation of the Male.

At this point Dr. Frazer (MS.) demurs to my remarks regarding the limitation of the intelligence of these Australian tribes. My view is not, he thinks, in accordance with the opinion of the best authorities, who hold that one is quite wrong to underrate their intelligence. The opinion of 'those who are best acquainted at first hand with the Australian savages believe them to be capable both

of conceiving and of executing such social reforms as are implied in the institution of their present marriage system.' And, says Dr. Frazer, 'we have no right to reject the deliberate opinion of the most competent authorities on such a point, especially when all the evidence at our disposal goes to confirm it' (vol. i. p. 280). He is very emphatic in this; he apparently anticipates some scepticism on the part of his readers. 'If we accept some of their statements and reject others according to an arbitrary standard of our own, there is an end of scientific anthropology', he writes, and he inveighs against the substitution of the deductive for the inductive method.

But in so far as these remarks are applicable as principles to guide us, they can concern only observations made on these people to-day; they cannot be permitted to bind our acceptance of inferences drawn by any one, no matter how competent they may be to observe existing facts. When, therefore, he remarks earlier in the same paragraph (p. 279), concerning the horror of incest, 'It would therefore be perfectly natural that their ancestors should have taken the most stringent measures to prevent the commission of what they, like their descendants, probably regarded as a crime of the deepest dye, and fraught with danger to society', we are not only at liberty, we are bound to dispute his right to draw any such conclusion from the evidence available, and to do so without laying ourselves open to the censure he metes out to those who use deductive

methods. For, in drawing this inference he himself begs the whole question at issue; without a tittle of evidence regarding the nature of these ancestors, totally regardless of the physiological forces which governed their most primitive instincts, he asserts it would be perfectly natural for them to hold the same views held by descendants who lived many thousands of years afterwards.

It is such remarks as those I have just quoted which impel the belief that Dr. Frazer has confused the origin of exogamy with its social development. Even if these people are now capable of appreciating the biological importance of preventing incest, for which possibility I find no sufficient evidence, that is no proof at all that their ancestors in remote times were equally well informed; indeed, such a view is only tenable if it can be proved that the savages of to-day are a degenerate people.

To return to the question of the origin of exogamy; if my view is correct, that it is due to the stimulus which ensures sexual gratification of the Male, then also exogamy cannot be the offspring of totemism, and in this respect I am in sympathy with Dr. Frazer and those older investigators whom he quotes; but if this be true, neither can exogamy have succeeded totemism, for, as a primitive Male habit, it would certainly itself precede any superstitious, fanciful idea evolved by the Female: and here I find reason to differ from them all. At the same time, where exogamy was grafted on totemism it doubtless shared in the growth of the ideas,

eventually translated into laws, which helped to establish the family or clan. One may indeed go further and surmise that totemism eagerly seized upon the habit of exogamy, already firmly established, and eventually, by its help, evolved laws which consolidated the family or clan.

I may doubtless anticipate various objections to such a view, but I am disposed to think they will all be met by a more careful consideration of the wide differences which exist between the origin of the habit and the development of the customs eventually evolved.

Regarding the influence of the Male on exogamy and of the Female on totemism, I think it cannot be denied that while sexual passions and sexual gratification are of far more moment to the Male, the idea of the family is, in its turn, essentially a Female sentiment. The former inculcates and stimulates the roving freedom which is characteristic of the Male, the latter consolidates the family and for the first time establishes the Female as an essential part of a social structure.

The Male and the Female individual may be compared in various ways with the spermatozoa and ovum. The Male is active and roaming, he hunts for his partner and is an expender of energy; the Female is passive, sedentary, one who waits for her partner and is a conserver of energy. To the Male it is the sexual act which is of moment, while it is the consequence thereof which profoundly affects the Female. When once the sexual act

has been accomplished the Male has no further physiological interest or responsibility in the breeding function ; in the case of the Female however the opposite is true, her interest and responsibilities begin only after union has been consummated. Thus it is the Male who is chiefly responsible for all growth of specialisation in sexual relations and it is to him we must look for the reasons why a Female of one kind is chosen for the purpose rather than the Female of another kind.

The fact that totemism results in the limitation of the freedom of the Male in this respect is, in my opinion, to be attributed to the power of those hidden Female qualities which exert such immense influence on society. It is to her interest to consolidate the family and by means of the family her own power, and she has succeeded in doing so to an extraordinary extent in primitive communities with the help of that totemism which, as Dr. Frazer says, is the product of her imagination.

Dr. Frazer (MS.) criticises this last paragraph ; he asserts that the limitation of the freedom of the Male is due to exogamy, not to totemism ; and that whereas I have formerly attributed exogamy to the Male here it seems that I attribute it to the Female, since totemism is of female origin. Such criticism is, I think, but another example of that failure to appreciate the difference between the origin and development of custom to which I have just referred. It is hardly necessary to point out that it does not at all follow that because the origin of the habit of

exogamy is due to the primitive sexual requirements of the Male, that its limitation must also be due to Male influence. Indeed, quite the reverse is to be anticipated, although it is conceivable that the Male himself may seek to modify his primitive habits, for various reasons. During the development of a combined exogamy and totemism we may expect that the Male will seek to regulate totemic law for his own convenience, and that the Female may similarly exert influence on exogamous habits; and this is precisely what we do find, as I shall presently show; but because such foreign influence is subsequently effectually applied the origin of the habit is not thereby affected.

I have asserted that the Male and Female are complementary to one another in so far as sex is concerned. I shall seek to show that among the most primitive people they are continually opposed to one another, continually engaged when opportunity offers, or when need arises in consequence of change of environment, in a battle for supremacy.

In this connection it is of great interest to observe the opposition of the Male and Female elements in societies, of the constant efforts of the Male to emancipate himself from the stringent sexual laws which, whenever possible, the Female rigidly enforces. Sometimes he succeeds for a period in shaking himself free, then reverts again to Female influence, even to that thralldom which is the end the Female is apparently ever instinctively striving for. And it is pertinent to point out that during wars and

times of stress, in the days of great deeds and sacrifice for patriotic ends, in other words when man's and woman's energies are thus strained, the woman is least fearful of neglect, least anxious about her influence, and has least reason for such fear and anxiety; on the other hand, when scarcity is followed by plenty, when hardship and great deeds are rare, then the Male gains superabundant sexual energy, seeks anew for freedom, and the Female as surely asserts herself in some way or other.

Such efforts are plainly visible in all kinds of societies, are shown in the histories of various peoples, and exist with but little if any diminished force to-day. It has been said that morality is a matter of geography, and there is no doubt some truth in the remark; it would however be fairer perhaps to say that the degree of stimulation of sexual passion is governed by environment. Evolution does not emancipate us from the influence of natural laws, and our power, especially over our two primitive systems of organs, is strictly limited thereby.

My reason for introducing this aspect of the subject here may perhaps be questioned, but, as I will show below, it is not wholly inappropriate since it bears upon the stimulus which actuates the motives and guides the behaviour of men and women towards one another to-day, especially as regards that tendency to exogamy which still exists amongst us. But there is another point. Among different savage peoples there is the same variation of environment which civilised communities experi-

ence. Some, for long ages, experience great hardships and the struggle for existence is strenuous, while others inhabit areas where Nature is prodigal, strife rare and life comparatively easy; in the latter totemism may be expected to be dominant and as strictly enforced as possible by the Female, whereas in the former the Male would make breaches in the totemic law and perhaps shatter it altogether, except in so far as may be convenient to him. How far the whole evidence available is in accordance with this idea I cannot pretend to say; there is undoubtedly great variation in the strictness with which totemic law is maintained among different tribes, and I glean here and there from the wealth of facts which crowd Dr. Frazer's pages, statements which indicate that strong support is not improbably available. For instance (vol. i. pp. 169-70), concerning the practice of magic for the multiplication of animals and plants used for food, which he (p. 113) formerly regarded as 'the key to the original meaning and purpose of totemism', he remarks that the practice of magic for the control of Nature increases with the variability and decreases with the uniformity of the course of Nature throughout the year. Again (p. 242), he states that totemic beliefs and customs change among the Australian tribes as we pass from the central arid regions towards the coast, where food is more abundant. Thus, among the central tribes of the Arunta the totemic system has nothing to do with marriage, a man is free to marry a woman of his own or any

other totem, while among the coastal tribes he never marries a woman of his own totem. This fact may be interpreted to mean that in the former case, where life is hard, the woman does not impress herself; that it is only when wealth creeps in that her social requirements stimulate her and she exerts her influence to control the errant Male. And finally (p. 337), in some districts on the coast where life is apparently luxurious, there is a further development, a partial or complete breakdown of totemism, or of the exogamous classes, or of both together is found; thus the Male here has succeeded in breaking away from Female restraint, and this appears, as Dr. Frazer says, 'to furnish unquestionable evidence of a social advance.'

We have indeed, in these days of wealth and plenty, constantly brought before us a similar example both of the effect of plenty and of high social development; an example which clearly indicates the persistence amongst ourselves to-day of this errant nature of the Male, of the forceful instincts which spur him to seek his mate outside his own class, and of the failure of his own women, amongst whom he is brought up, to stimulate him sexually. While one hundred years ago, a highly-bred man, member of an exclusive class, was expected to have a mistress chosen from a lower social grade, a mistress who was not acknowledged, now he is frequently seen to marry such. Thus it is somewhat emphatically demonstrated now that this seeking by the Male for a strange Female as mate

is not necessarily an example of what we commonly call moral vice, it is due to the power of a natural physiological law which overcomes all other considerations, braves all abuse, and overrides all the rules of social etiquette devised by the Female. All this is frankly acknowledged, for marriage takes place. In the earlier days the clan spirit was too strong; now men have shaken off, to a degree sufficient for their purpose, the Female yoke which bound the clan together.

It is usually supposed that the Male in such cases is devoid of all appreciation of the Female of his own class, that he is incapable of such appreciation; but in many, probably in the great majority of cases this is certainly not true; he is not without appreciation of them, for many reasons he admires them, but they fail to stimulate him sexually; Nature demands that he should seek, he is, in fact, constitutionally impelled to seek elsewhere for such gratification, and when he finds it he mates.

Where is the difference between the forces which act to-day in this matter and those which originally induced the habit of exogamy, a habit to which the savage man bound by strict totemic law reverts under conditions of ease and luxury, throwing off by the way those laws which limit his free choice of a mate?

I think there is no difference. So far as the reproductive system is concerned, the healthy virile man is still subject to primitive natural law,

and it is well it should be so for thus we have still the power to breed virile offspring.

Thus it is not solely natural selection which determines the matter, as Westermarck supposes. The choice of a more suitable mate is not only determined by her survival at the expense of those less suitable, but also by the physiological stimulus which enables the man to recognise her value to him personally.

I should perhaps here guard against a too free interpretation of the word luxury. I have used the word to depict a condition of ease and absence from stress, not in the sense of that over-indulgence in food and weakness of body which so often follow wealth. While freedom from over-strenuous work tends to stimulate reproductive activity, ease and indulgence tend to allay it. At the same time the sexual activity of the Male is not necessarily killed by luxury, while in the Female it is usually greatly lessened, unless indeed, abnormal, pathological sexuality supervenes. It is for this reason that excessive luxury deadens the sexuality of the Female, and it is the indifference which results from it which inclines her to allow greater freedom to the errant Male.

Finally, Dr. Frazer states (vol. iv. p. 88): 'two of the most pacific races of the world, the Eskimo of the Arctic regions and the Todas of Southern India, neither of whom are known to have ever engaged in war,' are at the same time 'also two of the most immoral races on record, as we count immorality

in sexual matters.' In this instance Dr. Frazer believes that this sexual laxity is due to the almost complete freedom of these people 'from that passion of sexual jealousy which has always been one of the most fruitful causes of dissension and quarrelling, of secret murder and open war among mankind.'

But freedom from jealousy should itself be explained in order to understand the matter, and there is undoubted reason to believe that it is probably brought about by sloth, it may be on account of the nature of the food eaten as well as by its profusion, by the isolation of the tribe as well as by its mode of life. The incentive to jealousy is, I take it, governed largely by the incentive to individual as opposed to communal possession. Given a condition favourable to sloth, absence from external irritation, and communal rights, there is little left to stimulate jealousy of any kind.

Thus, here again, it is primarily sloth, not that freedom from jealousy which no doubt follows from sloth, which is the original cause of the sexual laxity indulged in by these peoples. One has not far to seek in order to find examples of the same kind among highly civilised people to-day. Is it not sloth and the absence of sentiment (love) correlated with sloth, which is responsible for some of the marital infidelity of modern times? Where passion is concerned it excites and absorbs sentiment, but where sentiment is absent no stable permanent alliance is possible. After all, throughout

his active sexual life the errant nature of the Male is constantly suggesting to him the attractions of a strange Female. The Female knows this well, knows too that it is chiefly by means of the sentiment which she is able to create that the links are forged which bind her Male to her permanently.

I hold then, that the origin of exogamy is long antecedent to totemism and must be sought for among the biological laws which govern sexual desire in the Male. McLennan and others have probably had some such idea of the latter point, perhaps vaguely, in mind when framing their theories, but the chief attempt in this direction has been made by Westermarck.

In examining the work of this author Dr. Frazer says (vol. iv. p. 92 etc.): 'He finds the origin of exogamy in an instinctive and innate aversion to marriage and sexual intercourse in general between persons who have lived closely together from early youth', which instinct 'finally took the form of an aversion to marriage with near kin.' Dr. Frazer then proceeds to quote Westermarck as follows: 'that it is not in the first place by the degrees of consanguinity, but by close living together, that prohibitory laws against intermarriage are determined.' Thus, 'Aversion to the intermarriage of persons who live in intimate connection with one another has called forth prohibitions of the intermarriage of relations'; and this instinctive aversion to such marriages, he adds, 'may be the result of natural selection.' Evidence is then referred to

which shows the injurious effect of interbreeding, and Westermarck adds, we have reason to believe that this is more pronounced 'in savage regions, where the struggle for existence is often very severe'. He finds a sufficient explanation of the horror of incest in the fact that such unions are detrimental to the species, not because man in an early stage recognised the evil, but because the law of selection must have operated and those who avoided interbreeding would survive.

Dr. Frazer adds that it must be borne in mind that Westermarck means by 'marriage', monogamy, that is (quoting Westermarck), 'a more or less durable connection between male and female, lasting beyond the mere act of propagation till after the birth of the offspring,' a state which he believes prevailed as a rule 'among our earliest human ancestors.'

Dr. Frazer then criticises Westermarck and asks, how can natural aversion to sexual intercourse between persons who have been brought up closely together from early youth 'have been changed into something very different, namely an aversion to sexual intercourse with persons of near kin. This change from local exogamy to kinship exogamy is clearly the crucial point of the whole theory.' 'If the root of the matter is a horror of marriage between persons who have always lived with each other, how comes it that at the present day that horror has been weakened into a mere general preference for marriage with persons whose attrac-

tions have not been blunted by long familiarity?' Neither sentiment nor law, he says, now forbids marriage between persons who have been brought up together; while marriage with such housemates is probably quite common, that between brother and sister or mother and son excites deepest detestation. If this is not explained, he says, Westermarck's theory breaks down entirely at the crucial point.

There can, I think, be no doubt that Dr. Frazer's criticisms are sound if we accept his assumptions. If natural aversion to such sexual relationships as Westermarck describes cannot sufficiently account for the primary facts, all the more is it impossible to use such arguments for the purpose of explaining the change from local exogamy to kinship exogamy which Dr. Frazer says 'is clearly the crucial point of the whole theory.'

I am disposed to agree with Dr. Frazer that Westermarck's theories, as he puts them, do not explain what is requisite. I do not think that an individual feeling of aversion to incest or to the union of housemates, and the action of natural selection, are sufficient to account for the facts; but neither do I believe that the habit of exogamy alone can explain the change from the local to the kinship form of exogamy, and I think Dr. Frazer is not justified in claiming that it must fulfil such a test.

Dr. Frazer's main assumption is that exogamy succeeded totemism, and, as I have already shown,

there is sufficient reason to doubt this ; but I do not question that exogamy, once grafted on totemism, became involved in the laws which were subsequently evolved, and it is during the evolution of these laws that local exogamy was merged in kinship exogamy. Thus it is not to exogamy alone that we must look for the explanation of that change but to the laws of exogamy and totemism, to a combination of both these principles, the one of which, Dr. Frazer elsewhere says, cannot adequately be considered without the other (vol. i. p. 257).

If then, instead of natural aversion to union with housemates we substitute natural incentive to union 'with persons whose attractions have not been blunted by long familiarity', and if we admit that this most primitive of all Masculine sexual instincts exerted drastic influence long before the Feminine idea of totemism was conceived, the whole situation is altered. In that case the change from local exogamy to kinship exogamy, and what Dr. Frazer, with, I think, a somewhat extravagant idea of primitive feeling, calls the 'horror' of incest, and so forth, are all products of totemism superimposed on the simple natural sexual instinct which impels the Male to seek a strange Female for his greater sexual gratification.

To make totemism, or the products of totemism, in any way whatever responsible for the primitive sexual instincts of the Male, is surely putting a greater burden on this product of Feminine imagination than it will bear; indeed it obviously breaks down

altogether under it; but it is no less difficult to accept Dr. Frazer's deduction of the origin of exogamy from a belief in the evil effects of incest, for his theory precludes the belief that the primitive Male sexual instinct has any constructive influence at all, and yet it is now and always has been one of the most powerful of all the factors which regulate the relationship of the two fundamental elements of society.

The hesitancy and reserve, then, with which Dr. Frazer deduces the origin of exogamy from a belief in the evil effects of incest is amply justified, for exogamy surely existed long before incest was recognised as such.

There is no question of the fact that a Female who is a housemate does not as a rule stimulate the sexual passions of the Male to the same degree as a strange Female may do, and this is true no matter whether the housemate be of near kin or not. The term housemate, it must be noted, is here used to describe those who have been brought up together all their lives. Examples taken from civilised peoples of modern times will no doubt give contradictory results, many instances will be found of the marriage of housemates; but it must be recollected that, as civilisation progresses, the continuous living together from childhood upwards of blood strangers becomes more and more rare. It is also true that the Male's temporary absences from home become more and more frequent after puberty, and that housemates before puberty thus become strangers

afterwards if considered from a sexual point of view. In fiction, which is a wonderfully accurate guide in such matters, the marriage of housemates is very rare, and when it is depicted it generally follows unsuccessful efforts of the Male to gain a stranger for wife; it is, in fact, clearly shown to be more a marriage of sentiment than of passion, and as such is almost always brought about by the Female. The testimony of fiction is all the more valuable in this instance because, while it does depict faithfully the sentiments which give rise to what naturally happens in society, it is, as a rule, unconscious of the deeper impulses which govern those sentiments.

It is hardly necessary to give instances to demonstrate the fact that animals when brought into contact with strangers experience increased sexual stimulation. I think all breeders will agree that this is undoubtedly the case, and that it is true for both Males and Females.

So far as natural selection is concerned it no doubt plays a part, but it is not I think responsible for so much as Westermarck ascribes to it. Decreased fertility in consequence of inbreeding, though certain in some cases and probable in many others, is not at all surely proved for all. Decreased fertility in consequence of the union of housemates is still less evident. Disinclination for union with housemates among animals is purely a sexual matter, there is a want of keen sexual stimulus between them; though it is pertinent to remark

that absence of sexual gratification is not uncommonly experienced between animals which are not fertile together, and also that in the absence of sexual gratification coition is constantly found to be ineffective. There is a physiological explanation of this fact; in some species of animals coition appears to be necessary in order to induce ovulation, that is, the dehiscence of an ovum from the ovary, while in others, although sometimes ovulation takes place independently of coition, at other times the extra stimulus derived from sexual intercourse is necessary for the purpose. Thus it is clear that without such stimulus, that is, when the pair are not in accord, ovulation may fail to occur. There can be no question that this is true for women, and therefore to this extent there is evidence of decreased fertility from the union of housemates.

It is no doubt possible that observation of the results of incest might be impressed on the minds of a people even although they do not know the origin of the children born. If the union of brother and sister was constantly associated with the production of defective offspring or no offspring at all, while union of strangers was associated with fertility and virile offspring, it might be thought by a community capable of correlating the two facts that the former was an evil, although the cause was not understood. But Dr. Frazer has depreciated these people's power of correlating two such facts to a degree which makes it extremely difficult to imagine that such a vague idea as alone can have

been possible to them is enough to explain the complicated system they have elaborated for the avoidance of incest. Moreover, if they did observe that incest was associated with sterility, and if they did devise means to prevent incest, that is no reason why they should have gone much further and, as in their eight-class system, curtailed the choice of a man to women belonging to only one of the eight classes into which the community is divided. There is no utility in this from a biological point of view, and it seems to me wrong to assume that the custom arose from any observation of the result of biological laws; the practical use of exogamy is thus shown to be absent from their minds.

Dr. Frazer (MS.) quite agrees with this view, exogamy according to him (vol. iv. pp. 154 *seq.* and 168 *seq.*) being founded on superstition, that is, on imagination of consequences most of which are false, not on observation. It is I think unnecessary for me to point out again that I wholly disagree with the reasons Dr. Frazer advances for his agreement with the views I have expressed here.

Regarding Westermarck's plea that incest is likely to have more injurious effect in savage regions, it is difficult to express an opinion of value. Inbreeding is likely to have most injurious effect among poorly nourished communities in which heredity will no doubt cause family weakness to be more pronounced; on the other hand, an increased mortality among weakly infants incident to savage customs, and a healthy hardy life such

as savage peoples enjoy in countries where food is not too difficult to procure, would be likely to minimise the dangers of inbreeding.

And this 'horror' of incest—on what grounds does Dr. Frazer use such a word to express savage feeling in the matter? It colours the whole of his arguments, paints them with a vivid notion of loathing, repugnance, and shrinking disgust which is surely greatly exaggerated, if not quite unjustifiable; yet it would seem that the expression is designedly introduced to convey such sentiment in a highly specialised form.

Dr. Frazer adduces the punishment of death, which is usually inflicted by the Australians on all unlawful marriages, as one reason why he should so regard incest (MS.). But the punishment of death is common enough among savage peoples; various examples are given by Dr. Frazer of its infliction for unlawful marriages by other peoples; among the Ojibways, for instance, death may be inflicted on a man for marriage with a woman of the same totem (vol. iii. p. 48). Dr. Frazer claims (MS.) that this shows a strong abhorrence of such unions. But on what grounds does he make such claim? It indicates, I think, the power of the law among these people, but I fail to see any evidence of individual abhorrence in the matter. After all, the death penalty has only quite recently come to be regarded as an extreme measure in modern civilised communities; torture has always, and rightly been judged to be far worse punishment

than death. Only a very few years ago in our own country a minor theft was punished by death ; no one thought much about it even in those days. The fear of death, which I am led to suppose Dr. Frazer believes animates the Australian savages so strongly, is, I imagine, quite a modern sentiment ; to cite the death penalty as evidence of a savage's abhorrence of an act is to attribute to him a delicacy of feeling which is probably rarely an attribute of the most primitive of savages.

Moreover, Dr. Frazer points out over and over again that such 'horror' does not exist in many places ; it is by no means a universal horror among savage peoples, and among certain ancient civilised communities the practice of incest is encouraged, even commanded. Such relationship does indeed inspire 'horror' as civilisation grows, though for quite another reason ; originally one may reasonably assume it was merely avoided on account of the natural want of desire for such form of sexual intercourse if more stimulating inducement be offered. It is quite clear, from statements made by Dr. Frazer, that in the absence of strange women the 'horror' of incest which is supposed to exist was commonly found to be insufficient to prevent committal of the act.

Then Dr. Frazer himself points out that those laws which are promulgated to prevent incest are direct evidence against the argument that the desire for such is invariably absent. The law, he says (vol. iv. p. 97), 'only forbids men to do what

their instincts incline them to do ; what nature itself prohibits and punishes, it would be superfluous for the law to prohibit and punish.' And again, 'If there was no such propensity there would be no such crimes'. Now this appears to me to be extraordinarily mistaken reasoning, since if there is such a thing as the 'horror of incest' it must have arisen from a natural law ; had the law been founded on superstition it would have been due to fear of the result, not horror of it. But, in the first place, as I have already said, there is no reason to suppose the desire for incest is always wanting. Strong sexual passion may and frequently does arise in the Male in the absence of a member of the opposite sex, and if a savage Male is so affected he will seek to gratify that passion with any Female he may happen to meet ; in the absence of a strange Female he will commit incest, unless there be a law sufficiently strong to prevent him doing so. His instincts incline him to incest in such a case ; there is no question of Nature prohibiting or punishing him for gratifying his instinct, and no question of crime, apart from an artificial law.

In the second place, as there is no evidence that the evil effects of incest, in so far as such evil exists, is known to these people, it is begging the question to assume that the law is promulgated for the reason he maintains, 'the horror of incest'.

I strongly differ from Dr. Frazer's interpretation of the object of law in this case, namely, that law only forbids men to do what their instincts incline

them to do. I should say rather that law is necessary to prevent a man from doing what his nature will incite him to do only when the gratification of such desire is inimical to the supposed welfare of the community. It is the transgression of the individual against what is generally held to be advisable or right which it is sought to prevent, and thus law is particularly necessary to prevent the abnormal man from doing what his abnormal nature prompts him to do.

This seems to me to be a very different proposition, though Dr. Frazer (MS.) fails to see any difference between our views. What Nature prohibits there is no necessity to guard against by legislation, but in this case Nature does not prohibit incest, and passion does not wait to consider what Nature punishes, or may punish a dozen generations hence; and if law is only directed against certain individual propensities, why then, should it be enforced against a normal habit the evil result of which cannot have been foreseen? We have already disposed of the possibility that the supposed injurious effect of incest on the breeding capacity of animals and plants used for food can have had anything to do with the promulgation of a law against it. And yet there is such law. There must surely be some other reason than horror of incest in order to explain the origin of that law.

I think Dr. Frazer himself here falls into the error he elsewhere condemns; he refers to an instinctive horror of a habit, and thus attempts, as it seems to

me, to use biological arguments to prove his theory when human thought and will are really the factors which he elsewhere claims should be considered. He proclaims that the law he is dealing with is a human, not a natural law, that it is directed to restrain a natural impulse which, under certain circumstances, may arise, and he denies (MS.) that he uses any biological arguments.

I can only conclude that he puts a different interpretation to what I put on his expression 'the horror of incest'; that he does not use it to express a natural repugnance, loathing or aversion, but to express fear, fear of the consequences of an act due to groundless superstition. But if he does so the phrase seems to be singularly unfortunate, and moreover, if he does so, then the whole of his arguments which rest upon the instinctive repugnance to incest fall to the ground. Whatever may be the origin of instinct it certainly is not due to groundless superstition !

It seems to me very clear that the natural laws which induce exogamy have nothing whatever to do with the artificial laws which seek to prevent incest. These latter may or may not be the product of totemism but they are surely not a consequence of the primitive instincts which give rise to exogamy. Totemism, or some other such clan scheme, may be necessary in order that any law of the kind shall be promulgated, but totemism is not itself derived from such law.

For the reasons given above I do not hold with

Westermarck, but I confess it does seem to me he has hardly been accorded sufficient consideration by Dr. Frazer. I imagine the reason for this is that Dr. Frazer is perhaps somewhat disposed to underrate the value of biological evidence regarding customs which I, for one, am convinced have sprung up in accordance with the physiological laws which govern natural desire.

If, then, I am right, the origin of exogamy is to be found in the natural instincts of the restless, errant Male to seek abroad for a Female who will afford him the greatest sexual gratification, while the law which consolidates exogamy and seeks to abolish incest, is a product of totemism and is essential for its permanence. The close interweaving of exogamy and totemism which so generally occurs where totemism exists in its more complicated form, would thus be accounted for, and I suggest that in cases where the two principles are found to be separable there is also to be found antagonism between the sexes, an active struggle for Male or Female dominance. This matter will be referred to again below.

Thus it appears to me that Dr. Frazer's conclusion, based on evidence derived from the customs of these Australian savages, is arrived at on evidence so inconsistent that it is impossible to feel convinced by it. I have already hinted that possibly the contradiction may be partly due to confusion between the origin of the custom of exogamy and its later development, between the biological foundation for habit and the evolution of law by mental effort.

But it is hard to believe such confusion is possible in this case, Dr. Frazer's frequent reference to Nature's law seems to preclude such an idea.

In spite, therefore, of the formidable array of opinion opposed to me, it is only open to me to suggest, that it is more in accordance with the facts to hold that exogamy is not derived either from totemism or from a desire to prohibit incest; that it must rather be regarded as evolved independently, in accordance with the natural sexual instincts of the Male, and subsequently grafted on to the more recent and much more subtle Feminine idea of totemism. When once such union is achieved there will, also naturally, follow a struggle for dominance between the Male and Female ideals; the one will seek to rule the other. Such struggle is constantly seen to occur among individuals and in all sorts and conditions of societies, and the success of the one ideal over the other will depend upon the conditions of life experienced in different surroundings, will, and does in fact, depend upon environment.

If I am right, this struggle for dominance between the sexes, this sex antagonism is a law of Nature. In that case the sex antagonism evinced in our midst to-day is a normal result of environment and will be determined by the environment. We cannot alter the law, but we can modify the environment, and the nature of the settlement of our dispute will depend upon our recognition of that fact and the manner in which we make use of it.

IV

TOTEMISM

AFTER discussing various theories regarding the origin of totemism, all of which he gives reasons for discarding, Dr. Frazer concludes: it 'may perhaps be found in the mode by which the Central Australian aborigines still determine the totems of every man, woman, and child of the tribe. That mode rests on a primitive theory of conception. Ignorant of the true causes of childbirth, they imagine that a child only enters into a woman at the moment when she first feels it stirring in her womb, and accordingly they have to explain to themselves why it should enter her body at that particular moment. Necessarily,' he says, 'it has come from outside, and therefore from something which the woman herself may have seen or felt immediately before she knew herself to be with child. The theory of the Central Australians is that a spirit child has made its way into her from the nearest of those trees, rocks, water-pools, or other natural features at which the spirits of the dead are waiting to be born again; and since only the spirits of people of one particular totem are believed to congregate at any one spot, . . . a

woman has no difficulty in determining the totem of her unborn child' (vol. iv. p. 57 etc.). This is the belief held by all the tribes of Central and Northern Australia so far as they are known, he says, and since the book was written the fact has been confirmed.

The essence of totemism, says Dr. Frazer, consists in the identification of a man with a thing, animal, plant, or what not; and that identification would be complete if a man believed himself to be that thing which had entered his mother's womb at conception.

According to his theory, absolutely primitive totemism ought to consist simply 'in a belief that women are impregnated without the help of men by something which enters their womb at a moment when they first feel it quickened; for such a belief would perfectly explain the essence of totemism, that is, the identification of groups of people with groups of things.'

While the clue to totemism has been found in the beliefs and customs of the Australian aborigines, the most primitive totemic people known, a link in the chain was still wanting. The Australian beliefs cannot be regarded as absolutely primitive, he says, because, amongst these people, the woman does not suppose that what passes into her is actually an animal, or plant, or stone, etc., but that it is the spirit of a human child which has such animal or thing for its totem. This link has been found by Dr. Rivers amongst the natives of the Banks'

Islands (vol. iv. p. 58 etc.). There, some of the people identify themselves with certain animals or fruits and believe that their mothers were impregnated by the entrance into the womb of spirit animals or fruits; thus they themselves *are* the particular animal or plant which lodged in their mothers, only with a superficial and deceptive resemblance to a human being. That is why they partake of the character of such animal or plant and refuse to eat any of that species, to do so would be regarded as a kind of cannibalism.

Theoretically, says Dr. Frazer, this is an explanation of childbirth resting on a belief that conception can take place without cohabitation, but his quotation from Rivers shows that this is not actually the case; for, says Rivers (vol. ii. p. 91), 'it was clear that this belief was not accompanied by any ignorance of the physical *rôle* of the human father'.

In a note, vol. iv. p. 59, is recorded a case of what is believed to be absolutely primitive totemism in the Loritja tribe of Central Australia, a case which shows a similar belief to that of the Banks' Islanders.

It is on such evidence Dr. Frazer bases his belief in the conceptional theory of totemism. He argues that it explains why people commonly do not eat their totem, because it is a kind of cannibalism; why they sometimes do eat their totem, in order to maintain or strengthen their identity with it; why they are supposed to partake of the quality of their totem; why they claim to be able to exercise

magical influence over their totem ; why they are commonly supposed to be descended from their totemic animals and plants, and why women are sometimes said to have given birth to such. It explains the whole of the immense range of totems, because there is nothing from the light of the sun to the humblest domestic implement 'which may not have impressed a woman's fancy at the critical season and have been by her identified with the child in her womb.' And it explains why ancestors are often confused with totems, why men regard 'their ancestors as animals or plants in essence, though human in form' (vol. iv. p. 60, 61).

He concludes 'that the ultimate source of totemism is a savage ignorance of the physical process by which men and animals reproduce their kinds ; in particular it is an ignorance of the part played by the Male in the generation of offspring.' And he seeks to account for such surprising ignorance by the hypothesis that there must have been a time in the history of our race when ignorance of paternity was universal among men, because, while the part played by the mother is obvious even to animals the part played by the father is only a matter of inference not of perception. At the same time he suggests it is natural for these savages to-day to suppose that the child enters the mother's womb at the moment when she first feels it stirring within her, that before she felt it she would not think anything about it, and that when she felt it it is also natural to associate it with something that

attracted her at the moment and vanished: a kangaroo breaking through a thicket, a parrot sweeping past, a butterfly, a sunbeam, or what not. 'Such maternal fancies, so natural and seemingly so universal, appear to be the root of totemism' (vol. iv. p. 61 etc.).

It is unnecessary to add more or to follow Dr. Frazer further through the intricacies of the structure he weaves in such wonderful and often convincing fashion; it is a masterly effort, a stupendous work for which all students must be deeply grateful.

There are, however, certain points at the basis of his premises which appear to me to be hardly sufficiently established, and to be open to some question; points which, although they probably do not seriously affect the main body of the work, may possibly be thought to concern his theoretical view of the origin of conceptional totemism. These points occur to me as a biologist simply, as one who, for that reason, has some special interest in the effect throughout the whole body of those reproductive stimuli which govern so many of the habits of all animals, and which claim so large a share in the operations of the mind. The lower we descend in the scale of civilisation the more influence such primitive forces exert, and in drawing attention to that influence I do not feel I am unduly neglecting the intelligence, deliberation, and will which affect the growth of human institutions. At the same time I do seek to show that thought and will are not

free from the trammels of strong natural passion, and that amongst these savage peoples feelings and passions do exert more influence than I think Dr. Frazer seems disposed to admit. It is from such aspect I will regard the problem.

If Dr. Frazer's view is correct it is certainly remarkable that the most primitive savages, those of Central Australia, do not possess the purest form of totemism; that instead it is to be found amongst a people who are apparently possessed of much more intelligence, certain of the Banks' Islanders. These latter people believe that a child actually *is* the special animal or plant, etc., which is their totem, and yet they do not fail to understand the part played by the father in begetting the child. On the other hand, the Central Australians (with the single exception of the case quoted, of the Loritja tribe) believe the child is derived from a spirit of one of the dead, a spirit which is contained in some animal or tree, etc., and which enters the mother from its temporary host; and we are told they believe the child is wholly derived therefrom, that its father has nothing whatever to do with its creation.

It would appear from this that the Banks' Islanders have retained the more primitive form of totemism, what Dr. Frazer calls the essence of totemism, while they have gained the knowledge necessary to enable them to understand the part played by the actual father; and that the Central Australians have lost the primitive form of totem-

ism while they have never gained knowledge of the part played by the father.

But if this is so the Central Australians are a degenerate people, and, indeed, the view held by some authors that marsupials are degenerate animals might be used to maintain that the present condition of the whole country indicates that a relapse from more advanced conditions has taken place. But Dr. Frazer will not admit this, and if not, then why is the totemism they now believe in *not* the most primitive form of totemism? The case quoted of the Loritja tribe is not without interest in this connection.

For these reasons it is important to know whether the totemism of the Banks' Islanders or that of the Australians is really the more advanced. The Islanders would certainly appear to be the more intelligent since they have knowledge of the physical rôle of the human father, but they are credited with practising the purest form of totemism while the Australian beliefs are not regarded as absolutely primitive. It is of course conceivable that while the Islanders have advanced in knowledge of the result of cohabitation they have retained the primitive form of totemism, and that while the Australians have remained in ignorance of the rôle of the Male parent they have developed the totemic idea. It is possible this may be so, but is it probable? It is surely much more probable that the totemism of the Banks' Islanders is an advance on that of the Australians. But if this be true, what Dr. Frazer

calls the essence of totemism is not its most primitive form. In that case the totemism of the Australians is, as we should expect it to be, still more elementary and at the same time derived from something still less concrete, something further removed both from their own and the Banks' Islanders' present belief. So far as I know Dr. Frazer does not refer to this important point, but that it is important in connection with his view of pure totemism and of its origin and development, there can be no question; for if the pure totemism which is only found amongst the Banks' Islanders is not the original form of it I imagine his whole argument is jeopardised.

From the biological point of view the crux of the whole matter lies in Dr. Frazer's convinced belief that the Central Australian women do not know anything of the part played by the father in begetting children. As I have already pointed out in the previous section of this paper, their intelligence and moral feelings are referred to in a sense which is strangely at variance with the profound ignorance they are supposed to labour under as regards the actual methods of propagation, and I find it extremely difficult, nay I will say impossible, to reconcile these two widely different ideas of their intelligence.

This is indeed a case when a woman's help would be of the greatest value. I venture to think it is not improbable a woman would have discovered something more from the Female members of these

Central Australian tribes. Dr. Frazer, for instance, claims that it is natural such an ignorant savage woman should imagine the child only enters her womb when she first feels it stirring within her, and he asks, how could she 'think that the child was there long before she felt it?' The interval which elapses between the act of impregnation and these first symptoms of pregnancy is sufficient, he thinks, to prevent her from correlating the two.

But as a matter of fact she *does* feel the effect of pregnancy long before the child moves within her; she cannot fail to notice the changes taking place in herself in consequence of the presence of the child, long before it exhibits movements, changes which occur soon after the end of the first month of pregnancy in a marked manner, and even before that time to a less obvious degree. I am confident, and I think any woman who has borne a child will unhesitatingly state, that few women who have once borne a child could mistake the reason for the occurrence of these symptomatic changes at an early stage of her second pregnancy. And even if she had never yet borne a child, such early symptoms of pregnancy would induce wonder which her next-door neighbour, who is already a mother, would unfailingly diagnose for her long before the child exhibited movement.

Then, again, Dr. Frazer thinks the custom of unrestricted licence of intercourse between the sexes before puberty has familiarised these people with sexual unions which are sterile, and for that

reason they are less disposed to associate intercourse with pregnancy. But such intercourse before puberty is a very different matter to what it is afterwards, it creates very different feelings and is indulged in under quite different circumstances after puberty; moreover after puberty it *is* associated with pregnancy, and there is abundant evidence to show that many of the Australians recognise the advent of puberty. For these reasons it is obvious that instead of making these people less disposed to correlate sexual intercourse with pregnancy such experience would certainly induce them to be more disposed to do so. I don't think these arguments of Dr. Frazer's are tenable for a moment, indeed I think they are decidedly opposed to his view. That these people are not without intelligence he clearly shows and it requires little if any intelligence to associate the earliest phases of a second pregnancy with sexual intercourse; such knowledge is the result of observation, a faculty which these people undoubtedly possess in a very high degree.

Dr. Frazer writes me (MS.) that 'Mr. W. E. Roth, who has the advantage of having lived among the Australian blacks for many years as their protector and has carefully studied them, is of a different opinion. He says: "When it is remembered that as a rule in all these Northern tribes, a little girl may be given to and will live with her spouse as wife long before she reaches the age of puberty—the relationship of which to fecundity is not recognised—the idea of conception not being

necessarily due to sexual connection becomes partly intelligible ” (*North Queensland Ethnography*, Bulletin No. 5, Brisbane 1903).’

But I fail to see in what way Mr. Roth’s experience affects the point I make. Under the circumstances he defines, ignorance of the effect of cohabitation may become ‘partly intelligible’ for the first child, but that ‘partly’ is reduced to a negligible quantity for subsequent pregnancies. On the other hand, there is direct evidence that marriage is associated with pregnancy. Dr. Frazer writes (vol. ii. p. 258): ‘Some Australian tribes regard the acceptance of food from a man by a woman not only as a marriage ceremony but also as the actual cause of conception.’ Here is certainly indicated a correlation between marriage and conception in the mind of the people which is not destroyed by the inference Dr. Frazer elsewhere draws (vol. i. p. 577), that conception may be thought to be due to the food only; the same food would not be expected to cause conception unless it be associated with a man, or with marriage. Again, Dr. Frazer’s argument that the part played by the father is only a matter of inference not of perception, is certainly open to grave question. He surely neglects to consider the effect on the mind of both Male and Female of the emission of spermatic fluid, and of the failure to breed unless it is forthcoming. All such matters are closely examined by semi-savage peoples such as the Zulus, who have even special theories regarding the fertilising power of varieties of spermatic fluid, and I do not believe

that details of this kind are wholly neglected by any savage people.

There is another point ; great care must be exercised by a woman in avoiding the regions supposed to be infested with spirits of any totem if she does not wish to become pregnant ; and if a young woman should find herself in such region she is apt to simulate age and decrepitude or other device in order to escape impregnation (vol. i. p. 192). At the same time Dr. Frazer writes (MS.): ‘ In the tribes of Central Australia, which I regard as the most primitive, there the woman is free to bear a child of any totem ; the totem is determined by the accident of the place where she first feels the child in her womb.’ But if a woman desires offspring associated with some particular totem it is clear she must avoid the habitation of other totem spirits. I believe I am right in saying that such preference may be shown by women, but I gather that Dr. Frazer has no record of it and I cannot quote the authority for my belief.

But be this as it may, if a woman does not avoid any totem area when she is not pregnant nothing will happen ; it is only when she is pregnant that the totem spirit can exert the influence it is credited with, and if she should particularly desire to avoid any particular totem spirit it is then, I imagine, she will take special care to avoid the region which it inhabits. Moreover, she must avoid these places before the child moves within her, and whether she should wish the child to be of a certain totem or not, she must

frequent the region which is haunted by the spirits of a totem before that time arrives. Now how does she manage to do this if she is ignorant of the presence of the embryo before it moves in her womb? Must a woman in the one case never go near any other totem region than a special one, or in any case is she only obliged to disregard totem areas when she has reason to believe she is pregnant? If the latter alternative is not the case she must be very much hampered in her movements all her life, and hampered in a way which must gravely affect her use to the struggling community of which she is a member and for which she works. And if she does go near any totem region when she is not pregnant, when nothing will happen, is it to be supposed she fails to notice the fact?

Of course if a woman is indifferent to pregnancy and to the child's totem she may notice nothing except the exact totem area she was in when she felt the child quicken, or the last totem area she was in before it quickened. But a woman with child prior to the period of quickening is not indifferent to pregnancy, she feels there are significant changes going on within her, and if she has already borne a child she surely knows what these symptoms indicate; the matter is of great importance, she cannot fail to notice it, and if so she is quite able to choose her child's totem. If, then, it can be shown that a woman makes any choice of her child's totem it would be very strong evidence that she possesses such knowledge as I have indicated.

For the reasons he gives Dr. Frazer thinks that the theory he advances of their belief is sound, that such belief must 'commend itself to the primitive mind as simple and obvious.' I, on the other hand, would express my strong opinion that what he calls simple and obvious is a far more complicated and intricate belief than that which would naturally arise from instinctive knowledge of the facts. It is surely more difficult to imagine that a child is a tree than to imagine it is the son of its father whose appearance or general characteristics are reproduced in it. If these savages are deficient in memory to a degree which prevents them from correlating circumstances separated from one another by one month or a few months' time, they are nevertheless closely observant people, as are all hunters, and they will not fail to recognise the likeness between father and child.

Dr. Frazer (MS.) regards my dissent to his opinion that the theory of conception by totem spirits is simple and obvious to the primitive mind, as due to the fact that I am civilised and do not allow for the difference between the civilised and savage mind. But, after all, Dr. Frazer himself is also civilised, and is it not also possible that he is mistaken in what he regards as simple and obvious to the primitive mind? This is a matter of opinion not of fact, and I base my opinion on more primitive conditions than Dr. Frazer entertains. Let us go back to a still more primitive form of being.

A bitch is not more ignorant of the part played by

the dog in begetting her litter of puppies than these savage women are supposed to be of the part played by the father of their children. Indeed it is not impossible that some bitches are more intelligent, that some of them associate the act of impregnation at the beginning of the definite recurrent breeding period they experience, with the birth of young at the end of that period; there is no doubt they, and very many other animals, anticipate the birth of their young, while many nesting birds anticipate even the result of mating. Some, at least, of the Australian tribes are said to have definite breeding seasons, times when all duties give place to congress of the sexes; is it to be believed that, under such circumstances, the women do not, year after year, associate impregnation which is confined to certain times with the symptoms they experience a month later? I think they cannot fail to do so. The fact that the child issues through the vagina, that the process of suckling the child induces feelings akin to sexual gratification, and various other similar associations which link together the young bride and the young mother, must all help to lead imagination towards discovery of the truth.

In thinking so, Dr. Frazer writes (MS.): you differ 'from the men who have studied these savages for years and who speak of them from observation and enquiry. I prefer to accept the evidence of such men on subjects which they know. Among the witnesses are men so different as Prof. Baldwin Spencer (a zoologist) and the Bishop of North

Queensland, both of whom have independently and personally assured me of the fact.' Assured him of what? Of the fact that these savages say they do not associate cohabitation with pregnancy? I have no right and no reason to doubt that they say so, but I have some reason to doubt if their ancestors were so ignorant as they say they themselves are. I may even doubt if they themselves are so ignorant as they profess to be. The profession of ignorance, when it is to serve a purpose, is not confined to civilised peoples, and I will give below an example which is directly applicable to the case in point.

Again, in vol. i. p. 104 etc., Dr. Frazer describes certain elaborate ceremonies known as 'Intichiuma'. Now amongst other reasons these ceremonies are performed in order to ensure the multiplication of totem animals or plants which are necessary for food; and they are performed in the case of many of the totems at the approach of spring-time, and 'just when there is promise of a good season,' that is, a good breeding season. But the people themselves feel the stimulating effects of Nature on their own reproductive systems at these times, and even if they do not breed precisely at the same time as animals it is hard to believe that they do not connect with themselves the same phenomena they see going on around them amongst these animals. Sexual connection amongst animals in such districts is confined to their breeding periods, and at that time it is going on freely all around these observant followers of the chase; they must see it, and they

feel the same desires themselves. The result among the animals is a great increase of young animals, and they are produced quickly. I do not think the hunters in any part of Australia can fail to connect the two facts in regard to the beasts. Whether they think it is the result of their magic ceremonies or not, they see the animals copulating, they very soon see the young produced; and this is a regular and constant succession of phenomena at certain times of the year, which times they certainly recognise and to some extent anticipate, for they perform their ceremonies 'just when there is promise of a good season.'

Since this last paragraph was written Dr. Frazer informs me (MS.) that the natives of North Queensland do recognise the part played by the Male amongst animals, and he very kindly sends me the following quotation, which he overlooked when writing his book, from W. E. Roth's *North Queensland Ethnography*, Bulletin No. 5, p. 22: 'Although sexual connection as a cause of conception is not recognised among the Tully River blacks so far as they themselves are concerned, it is admitted as true for all animals:—indeed this idea confirms them in their belief of superiority over the brute creation.'

This is a profoundly important contribution to the subject; in that last sentence is conveyed evidence of the origin of their declared ignorance. These natives are *not* therefore ignorant of the result of cohabitation, I felt sure they could not

be ignorant of that fact ; they do not ' recognise ' it for themselves, they ignore it so far as it concerns themselves because it confirms their belief in their own superiority ! They know it then but they won't admit it ; why ? because their religion, their belief, their superstition demands denial of it. But they are not so ignorant as they declare themselves to be, far from it.

Is not this fact alone sufficient to justify my scepticism, both of the meaning to be assigned to facts which have been recorded, and of the elaborate scheme Dr. Frazer builds up in accordance with the interpretation he feels obliged to put upon those recorded facts ?

In effect Dr. Frazer imagines a peculiar kind of wall around the mind of the savage ; he declares the savage cannot be judged by the civilised man because his methods of thought and his power of reasoning are on an entirely different plane : ' there is a wide interval which separates the thought of the savage from our own ' (vol. iv. p. 41). And yet there would not seem to be any great, any fundamental difference between this refusal of the Queensland natives to admit of equal comparison between themselves and the lower animals, and the belief held by a vast proportion of Christian men and women to-day in the immaculate conception of the Virgin Mary. The Christian religion requires that in this one particular instance conception was induced by a spirit, the religion of the Queensland natives demands that spirit conception is universal

amongst human beings. But both the Queenslander and the Christian know the truth, it is only superstition which compels them to deny it for a special reason or for a particular case. In this matter I can see no essential difference between savage and civilised man.

There is in fact here a breach in Dr. Frazer's wall, and in passing through it we may clearly observe that that wall is built up of precisely the same kind of superstitions, is bound together by the same hope for advantages supposed to accrue therefrom, as is the wall around our own minds. There is not so much or so great difference after all. A little more superstition, a little less hope, perhaps, in the savage mind, the binding cement may be less strong with them; but the same materials are plainly recognisable in both. Is it possible that some of the difficulties which Dr. Frazer finds are more imaginary than real, is it possible that he is hampered with facts because he declines to make use of deductive methods by which he may resolve them into order?

These reflections induce me to ask, Why should the North Queensland natives recognise the cause of conception in animals and the natives of Central Australia apparently fail to do so? We have seen that animals may anticipate the result of mating; which, then, of these savage peoples retains the most primitive condition? There is absolutely no proof that ignorance of the part played by the Male in the begetting of offspring is a sign of a primeval condition, and Dr. Frazer's assumption that such

ignorance is natural is not, in my opinion, justifiable ; on the contrary, all the evidence we have which bears on the subject indicates that long before totemism was ever thought of, a woman, when she had a second child, conceived during the annual breeding season, associated its presence with the sexual congress which occurred at that breeding season. For man to entertain a scheme which differentiates between the lower animals and himself may indicate the development of his imagination, but to be actually ignorant of the fact itself I apprehend is indication of degeneracy. In accordance with this evidence one would expect to find that the Central Australians are degenerate, and are not, as Dr. Frazer supposes, the most primitive of savages ; in which case, after all, the Banks' Islanders, who possess the more primitive form of totemism, would be the more primitive people.

As a matter of fact, it is undoubtedly much simpler to connect the two facts of sexual congress and the birth of young than it is to invent any other theory whatever. Moreover, since the Intichiuma ceremonies are performed at the same time as breeding begins amongst animals, the same interval passes before the young are produced ; if, therefore, the defective powers of memory of these people will not allow them to correlate coition with maternity among animals, how can they be supposed to correlate their magic ceremonies with the same result ?

Reproduction is the most important of all functions after appetite has been satisfied, and where

the fertility of animals and plants is recognised as essential for the production of food it becomes of primary importance to those who foresee the possibility of failure of the supply of food. It seems that these Australian savages, in spite of their inability to correlate some facts which occur at an interval of a month or so, are fully capable of recognising the value to them of a good breeding season, although the benefit thereof is not apparent until several months have passed. I have not found any explanation in Dr. Frazer's book which reconciles this apparent contradiction and I think such explanation is essential for the demonstration of his theory. If it is not forthcoming then these savages are clearly more intelligent than one would suppose from the account given of their beliefs regarding sexual matters and reproduction.

Dr. Frazer (MS.) objects to this reasoning because 'in these magical ceremonies for the multiplication of animals and plants the intercourse of the sexes or the imitation of it plays no part.' And he thinks this 'is a strong argument in favour of the view that the Central Australians who perform these ceremonies do not associate the multiplication of the plants and animals with the intercourse of the sexes.' For my part, I think that the fact that these ceremonies are performed to ensure the multiplication of animals and plants at a time of year when breeding occurs, and especially when there is *promise* of a good breeding season, a promise which their own reproductive system, both of men

and women, is capable of appreciating, is conclusive evidence that they do know that both Male and Female animals are similarly affected and that congress of the sexes takes place amongst animals at that same time.

Year after year the same series of phenomena recur; the ceremonies, the copulation, and in a few weeks the birth of young. I repeat, these people are eminently observers, and I do not think it is possible that Intichiuma can have *arisen* apart from knowledge that after the copulating season young are born. It may be they came to believe that Intichiuma plays the most important part in the production of young; it may be they have even come to believe that Intichiuma is essential for the production of young; but before that religious ceremony was ever invented they recognised the breeding season and knew when to expect the young to appear, and if they now deny correlation between the two it is because their awe of the power of the spirits, because their professed superstition demands denial.

I suspect that such theory as is involved in the magic ceremonies was invented for some quite different reason and may have been consolidated for the same reason. I will refer to this matter again below.

Finally, in vol. ii. p. 259 etc., Dr. Frazer gives an example of a custom practised to-day which he claims shows an inherent belief in the fertilising power both of trees and fire. To this day the

superstitions of the South Slavonian peasantry, he says, 'are redolent of the most remote antiquity.' Amongst them 'the barren woman is pitied and despised. Her position in her husband's home becomes more and more untenable', and both husband and wife try to remedy the evil by magic. He then gives in detail the methods adopted in order to become pregnant by means of the 'tree-soul', or a spark of fire, and concludes: 'These practices seem plainly to imply a belief that women can be got with child directly by a tree-soul, a spark of fire, or the spirit of a dead child, without the need of intercourse with the other sex. Such a belief is identical in principle with that which we have found to be held by the tribes of Central and Northern Australia and by the Melanesians of the Banks' Islands.'

But in this case, after these ceremonies are performed, do the man and woman cohabit or not? Dr. Frazer appears to believe the ceremony is supposed to result in pregnancy without the aid of sexual intercourse. Now it is quite certain that if the people rely on that belief the magic will always fail; but if it always failed it would fall into disrepute, therefore we may be sure sexual intercourse takes place after the ceremony just as it did before, and in that case they do not rely solely on the magic. I suggest that in this case the magic is used as an aid to fertility not as a substitute for sexual intercourse; that these practices do not imply belief that woman can be got with child directly by such

means ; and that the words, ' without the need of intercourse with the other sex,' are misleading. At the same time I am quite disposed to believe this belief is identical in principle with that held by the Australians, as demonstrated by the performance of the Intichiuma ceremonies.

Thus throughout his book he bases his views on the supposed ignorance of the efficacy of sexual intercourse, and, as I have attempted to show, such ignorance is extremely doubtful if not wholly impossible to believe, although savages may wilfully ignore what they know, as we ourselves do.

There is, however, I think, another possible and obvious construction to be put upon the reason which gives rise to the various customs concerning fertility which I have quoted from Dr. Frazer's book, and one which, so far as I can see, fulfils all the conditions required to explain the facts themselves. All such customs might be explained equally well if it be acknowledged that the belief in the efficacy of magic consists in a belief that thereby an increase in the fertility of a woman, or other animal, or plant is assured ; in a belief that these magic remedies for sterility in women are performed for the purpose of rendering those women more susceptible to the influence of the Male element ; in a belief that the Intichiuma ceremonies increase the fertility of food animals and plants, make them more liable to bear offspring or more capable of doing so. In view of the profundity of the ignorance which is necessary in order to explain Dr.

Frazer's view, ignorance which is so completely at variance with these people's constant experience of their own breeding periods and of those of all animals around them, experience which they cannot fail to possess and which I maintain Dr. Frazer himself shows they do possess; in view of such known experience it seems far more probable that all ceremonies connected with the fertility of food animals and plants, and of people themselves, in all countries, are not primitive beliefs but have been evolved later, and have come to denote the belief that such magic stimulates reproduction, not that it actually creates the young.

The fact that special ceremonies are introduced for the purpose of obtaining a Male child, such as the ancient Indian custom described in vol. ii. p. 261, bears on this point. This ceremony is supplemented by the words, 'May a male embryo enter thy womb, as an arrow the quiver; may a man be born here, a son after ten months.' This is confirmatory of the view I have expressed, for in such cases it is not fertility itself which it is sought to ensure but fertility of a certain kind, the bearing of a Male child.

As an aid to fertility such belief in the efficacy of magic might well be entertained. The variability of the reproductive power of all animals and plants, and of women specially, cannot fail to have been observed; many of the causes which induce such variability are obscure to us to-day and are surely unknown to savage peoples; is it not then reason-

able to suppose that they should seek for means to ensure abundant fertility ? It is to be noted that the Australians in many cases perform Intichiuma ceremonies 'just when there is promise of a good season,' just when experience leads the wise men of the tribe to expect abundance. Certain natural conditions which favour abundant fertility are then clearly recognised by them, and they take care to select such times for the performance of their magic ceremonies. It is clear that by this means they provide as far as possible against the failure of their magic whether they believe in its power or not, and it is thus they may establish their own power and position as wise men of the tribe.

There is still another point regarding Intichiuma which it is important to note, namely, that the more variable is the output of Nature, the more common is this practice of magic. Dr. Frazer tells us, though he does not appear to observe the importance of the fact, that where natural conditions ensure uniform and abundant increase, the aid of magic is rarely made use of. In other words, dire necessity is the origin of the practice ; where additional stimulus to reproduction is not needed it is not thought of.

There is no hint in all this that the aid of magic is resorted to for the purpose of creating offspring, no evidence even of the belief that sexual intercourse is necessarily barren of result without further aid, no evidence that such intercourse is discarded in favour of magic. It is clear that none of these

things can be, for without sexual intercourse belief in the magic itself must perish.

Now to consider the bearing of this on Dr. Frazer's theory of conceptional totemism. He relies on the assurance he has received that the Central Australian people do not recognise the part played by the Male in the production of offspring. For the reason already given, it appears to me to be inconceivable that people with such intelligence as these natives are shown to possess, can be as ignorant as they are supposed to be in regard to this vital matter. The women at any rate cannot fail to have a shrewd suspicion of the facts; we at least know that there are physical reasons why such suspicion should be regularly and forcibly impressed upon them, and why they should be just as regularly justified. Perhaps it is to the women's interest to hide what they have such good reason to suspect. It would not be the first time a woman had deceived either a priest, or a man of science. As a well-known woman writer declares, regarding certain Feminine savage qualities, 'the woman who tells the truth and is not a liar about such things is untrue to her sex.' The anthropologist will do well to recollect that in dealing with totemism he is dealing with a Feminine idea, and it is not easy to be assured of what and how much a woman knows, whether she be a savage or not. Is it not the fact that marital infidelity is punished with death amongst these people? If so, is it not also certain that a kangaroo bounding through the thicket may

prove to be a very convenient excuse for illegitimate pregnancy? I will give an instance which bears on this point.

From statements made by Dr. Roseoe (*The Baganda, their Customs and Beliefs*, 1911) it is clear that Baganda women found with child when they ought not to be pregnant, take advantage of the belief in spirit conception to claim that their condition is due to a spirit, and by this means they actually escape punishment. But it is absolutely certain such a woman knows her claim is not justified and it is equally certain that her lover knows he is responsible for her condition; and when these young people in their turn become judges of the faults of others, is it to be supposed that they have forgotten their own experience?

Dr. Frazer, in referring to this matter (vol. ii. p. 507), says that while the Baganda believe in conception without congress by the aid of the banana flower, they hold that it is exceptional, and he is of opinion that as a woman's excuse for being pregnant when she ought not to be so, is readily accepted by her husband, such willing agreement is proof of the firm faith of these people in the possibility of conception without sexual congress. I think this is perhaps not an unfair example of Dr. Frazer's attitude towards the question; he is of opinion that the ready acquiescence of the husband shows firm faith in the belief, and he takes no account whatever of the effects of experience, that is observation, on the human mind.

I am not of his opinion. I hold that when the man, the lover of that woman, found one of his own wives pregnant when she ought not to be, he would know very well what caused her pregnancy. I suspect that very few of the men of the tribe had not been at one time or other similarly behind the scenes before they possessed wives of their own, possibly they even revisit their old haunts after marriage, and that few would have any hesitation in discounting the supposed effect of the banana flower. The reason for the ready acquiescence of the husband is, in my opinion, to be sought for on quite other lines. The belief, I hold, is a Feminine creation and is of immense value to the woman; but it is useful also to the man since he also can hide behind it when necessary. Clearly it is not politic for him to deny it, and he has been brought up to say he believes it. The woman creates this loophole and the man accedes to it. Savages recognise the value of such convenient excuse just as clearly as we frequently do; besides, in their case the penalty for omission to do so is like to be death.

But sometimes, says Dr. Frazer, a woman is actually executed for the fault, when she is 'for any reason debarred from having recourse to this plea' (*i.e.* impregnation by the flower of the banana). Clearly then, adultery is only admissible when the banana is in flower, and as everybody knows that fact, a woman who becomes illegitimately pregnant when there is no banana flower or when she cannot find one, transgresses the law which her own sex

is so largely responsible for, and suffers death. According to our own social code that is also reasonable, for such flimsy excuse for inflicting social punishment is commonly practised by the women of our own country.

After all, the physiology of the reproductive system is the same for all human beings and sexual passion is only variable in very moderate degree. Even if it should be maintained by some authority, as is probable enough, that Baganda women are conspicuously moral, one may reasonably expect them to be so judged—with the aid of their men and the banana flower. And thus, where we touch upon the sexual relations of savage peoples we are met by precisely the same intangible difficulties that confront us when we deal with the same problem at home ; we are dealing to a large extent with unknown quantities in both cases, for the woman is concerned as well as the man and the power of analysing the confused mass of data presented to us is not given to any members of one sex.

This brings me to summarise up to the point we have reached as follows. Dr. Frazer suggests that totemism is a product of the Female mind ; I think that is a most valuable generalisation and am in entire agreement with him. He further suggests that the sick fancies of pregnant women may be responsible for the idea of conceptional totemism ; I think it is quite possible that they may be responsible for what has ultimately resulted in that belief ;

failing the capacity fully to understand the Female mind it is certainly a feasible suggestion, and from a biological point of view there is much to be said for it. But he seeks also to show that such an idea is a wholly natural one because these people are ignorant of the true cause of conception; and there I entirely differ from him.

The only evidence which I judge to be of value which Dr. Frazer can bring in support of his theory is, that these people now declare they are ignorant of the part the father takes in procreation; and I hold that this evidence is of no value as proof of similar ignorance on the part of those remote ancestors who initiated totemism. On the contrary, all the evidence we can bring to bear on the subject from a comparative point of view indicates that primitive man was not ignorant of this fundamental fact, and such evidence appears to me to be so strong that I consider it is irrefutable. Moreover, there is evidence that while these Australian savage people now declare their ignorance they still act in a variety of ways as if they knew the true facts. This being so I maintain that the initial cause of this conceptional idea of totemism is due to a superstition which overrode instinctive knowledge of the facts; in other words, that the idea is not derived from ignorance but is a manufactured scheme, originating at a period in the history of man which is subsequent to his conception of superstitious fear of personal or individual spirits, and arising out of such superstition. Such a view

increases the probability that the sick fancies of pregnant women may well be responsible for the theory of conceptional totemism, and is in no way opposed to the influence such belief exerted in the origination and in the consolidation of totemism.

The fact that totemism is a creation of the Feminine mind is in itself evidence that it is not a fundamentally primitive idea. It may I think be taken as an axiom that all Feminine creations are secondarily established, and that totemism itself, being a Feminine idea, was essentially designed to consolidate the woman's interests.

I suggest, therefore, that while these Australian savage women were not originally ignorant of the part played by the father of their children, they called in the aid of spirits of extraneous things with the hope of thereby conferring special qualities upon their offspring, or in order to endow them with some special claim to identification. That this idea arose from sick fancies I think is highly probable, but the obvious effect of its adoption was to raise the status of the mother in society, and it is not impossible the Female mind was actuated by some such design.

Subsequently it may be that, under the influence of a fostered superstition, the belief arose that the spirit so called in acted as an aid to fertility, or that it did actually confer life on what had already been recognised as an inert embryo in the womb, and thence that the life of the child, demonstrated by its movement, is due to the totem spirit. The establishment of such a belief would certainly be of

immense importance for the consolidation of totemism, but I think there is abundant evidence to show that it has been superimposed on the original belief.

Thus, while my suggestion is opposed to the belief in the primitive origin of conceptional totemism which Dr. Frazer advocates, it is not opposed to an existing conceptional totemism in a general sense, and is not opposed to what he calls the essence of totemism, 'the identification of a man with a thing, animal, plant, or what not.' Where it clashes with the latter is in regard to the primitive nature of that belief.

Dr. Frazer is disposed to look for the essence of totemism among those who identify a man with some external object, among those who believe the man *is* that object. But is it not probable that such a belief has grown from a less elaborate form of totemism? Is it not certain it must be a matter of growth? Is it not certain such a scheme of complete identification of a man with an animal or plant is the resultant of a variety of influences which were directed, in the first place, towards the realisation of much simpler thought?

I have not been successful in finding in Dr. Frazer's book what appears to me to be sufficient justification for belief that totemism has its origin in the desire of the savage man to be something else. Why should he originally so desire?

On the other hand, if, as Dr. Frazer suggests, the sick fancies of pregnant women are responsible for

conceptional totemism, may it not reasonably be held that thus a mother's desire was stimulated, that by such means she hoped that her child should possess certain qualities which she imagines are contained in some external object ?

I suggest it was for this end the aid of the spirits was first called in, and that the actual identification of a man with a thing was an idea subsequently developed.

V

TOTEMISM—(*concluded*)

ENDEAVOUR has been made in the previous chapter to present the case as concisely as seemed possible. There are however some few points which, while not essential to the argument I have advanced seem to me to strengthen it, and I present them here. The chief of these is the suggestion that the aid of spirits was originally invoked by the mother with the hope of benefiting the child.

Dr. Frazer's theory that totemism is a creation of the Feminine mind is, I believe, a most valuable generalisation, and although I venture to doubt the validity of the reasons he advances in support of that view, I find others which seem to me even more strongly in favour of it. Thus the difference between us does not concern the belief that the Feminine mind is responsible for totemism, it concerns the method by which she has arrived at the conception of totemism. The course of reasoning I adopt disposes me to think that the influence savage women exerted by means of totemism was greater than I judge Dr. Frazer is inclined to allow ; while further I believe it is to the growth of that influence, gained in the first instance in association

with the mysteries of maternity, that modern woman owes the true position she now rightly holds in society.

The cause of the difference between us, however, I think lies deeper. It appears to me that Dr. Frazer is imbued with the conviction that the savage mind is fundamentally different from that of civilised man while I am impressed with the similarity between them. Or it may be that the differences he discerns between them especially attract him, and while he seeks to find some extraordinary and, as it seems to me, unnecessarily complicated reason in order to explain the origin of recorded beliefs, I am disposed to look for that origin in terms of the simplest mental effort, by the aid of means which are not drastically opposed to our own methods. Thus I would make use of such knowledge as I possess of the physiological laws which govern impulse and which must so largely direct the instinctive action of primitive man.

If for this purpose I use deductive as well as inductive methods, on what ground shall Dr. Frazer censure me? These problems undoubtedly have a biological aspect, they are not solely concerned with human intelligence and will. Moreover these human qualities have themselves undergone a process of evolution; they did not always stand for what they now represent. But whether my view is right or wrong, it is certain that no solution of the problem, no true conception of the origin of either of these ancient customs can be arrived at

without consideration of the influence of biological law. Dr. Frazer appears to me woefully to neglect, perhaps, sometimes, even wilfully to discard the bearing of such evidence.

Thus, when Dr. Frazer makes great parade of the obligations laid upon all students of savage institutions to pay due regard to the powerful effect of human intelligence, deliberation, and will in moulding human destiny, he is surely right in claiming that these are factors which exert enormous influence. But does he pay due regard to them? I think he fails to do so in one very particular and important sense. He does not set sufficiently definite limit to their power at the different stages of development of a people; he uses them, it seems to me, without due regard to the process of their evolution, as if they were supplied ready made in the form in which we now know them.

These faculties of the human mind themselves have arisen in accordance with biological law, and their growth has been determined in accordance with the facilities accorded by such law. In order therefore to pay due regard to the influence they have exerted on the origin of human customs and laws, one must not omit to endeavour to discern the condition of that intelligence and the forces which influence that will at the stage of development which presumably existed when those customs and laws, which we are considering, originated. Dr. Frazer is convinced that they are of vast antiquity, and it cannot I think be denied that the intelligence,

deliberation, and will possessed by these savage peoples at the remote time when these customs arose, were then of a very elementary kind.

Lloyd Morgan, in his interesting book on *Habit and Instinct* (1896) (pp. 137, 140), remarks that in matters of human conduct impulsive behaviour is to be distinguished from deliberate conduct, the former being the more deeply ingrained in the mental nature; thus 'anger or fear, desire or irritability, is often a predisposing condition to impulsive action.' To speak generally, he says, 'impulse is the tendency of the organism to satisfy its immediate needs.' Amongst primitive savages, then, I speak of very ancient times, 'impulse' will be the chief incentive to 'will' while 'deliberation' will be a rare quality.

So far as intelligence is concerned, without touching upon the question of the origin of the faculty or its most primitive relation to instinct and habit, it cannot I think be denied that its growth is intimately associated with the power of observation and the result of accumulated experience; and just as impulse is more deeply ingrained in the human being, and exerts greater influence on the actions of primitive man than does deliberation, so will observation and experience limit while they guide primitive intelligence.

Thus, long ages ago, the deliberation and will of these most primitive savages is probably to be regarded as essentially governed by impulses which are generated by desire to satisfy immediate needs,

while their intelligence cannot be divorced from observation of surrounding phenomena.

It follows that when Dr. Frazer points with emphasis to the statements which demonstrate the high order of intelligence these people now evince, and when he makes use of this evidence in order to insist upon the full regard which should be paid to the influence of these highly developed qualities on their actions and on their reasons for action in ancient times, he is, I think, hardly paying that due regard to the value of these qualities which he declares is right and proper.

If, then, primitive 'will' was so profoundly affected by impulse as we have cause to believe, for this reason alone I judge we have sufficient cause for the assumption that exogamy was originally due to a sexual impulse of the Male to seek for a strange Female for mate; for such impulse is certainly one of the most primitive of Male sexual desires, and he is by nature the arbiter of the mating process. For this reason also I judge that, observation and experience being the mentors as well as the forerunners of intelligence, in disregarding their effect on the faculties of savage man, in putting in their place that pure imagination which can only have been subsequently acquired, perhaps as a by-product of their exercise, Dr. Frazer is reversing the natural order of these phenomena. It is not difficult to conceive that imagination, especially when it is fed by fear or desire, may bury in superstition the result of experience, for superstition is converted by

such agencies into an impulse of great power. But even so, one has no right to refuse to entertain the existence of knowledge previously gained by ages of observation and experience ; and where evidence actually exists of the persistence of the old knowledge, where it can be found peeping out here and there from underneath the thick coating of superstition laid upon it, one has every justification, it seems to me, in dragging it forth and displaying it, not as a new but as an old possession which has long been thrown aside, buried, and forgotten.

It is thus I interpret the story of conceptional totemism ; an impulse due to the sick fancies of the pregnant woman, due to fear or dread or desire, or all of them, has bred a superstition which necessitated the relinquishment of instinctive knowledge previously acquired, and all but buried it. It is not quite buried, however ; the Intichiuma ceremonies are performed just when there is promise of a good breeding season, and thus necessity demands recognition of the truth ; the Tully River blacks grant that the breeding of animals, at any rate, is governed by the laws of Nature, while human beings are only exempt from the force of those laws because they are thereby confirmed in the belief of their superiority over the brute creation. Great indeed is the power of superstition !

But now, was it dread or desire which first arrested the restless visions of the pregnant woman ? Her sick fancies are abnormal, whimsical creations, but like enough they often bear upon the child within

her. Dr. Frazer's story of the origin of conceptional totemism is not entirely free from contradiction ; in attributing it to the sick fancies of the pregnant woman he believes she requires something to explain the origin of the life of the child within her. Thus, it appears, it is not, in his opinion, either her sense of fear or her sense of desire which is caught by these fantastic thoughts ; it is her power of reason which he claims is thus stimulated. I find such a view very difficult to entertain ; it is not reason which is conspicuously allied with sick fancies.

Then again, he finds the most primitive form of conceptional totemism amongst the Banks' Islanders, who, while they recognise the part played by the true father of the child, assert that the mother is impregnated by the entrance into her womb of spirit animals or spirit plants and that the child is nothing but the particular animal or plant which effected lodgment in the mother, the child itself having only a superficial and deceptive resemblance to a human being (vol. iv. pp. 59, 60). But if the woman is not ignorant of the part played by the father why should she originally have required extraneous help to explain the *life* of the child ? All the mammals around her produce their young alive, it is a phenomenon which is obvious to every one. A woman might wonder why a child should be produced dead, but to bear a live child is natural enough, it has been the common experience of all her ancestors.

To endow this primeval sick woman with fancies

which relate to the greatest mystery of life is a bold imagining. A child's thoughts are arrested by the little details of life, the great truths pass unnoticed ; they are taken for granted ; and if there is any truth in the principle of evolution, the mind of the primeval savage is of the same order as that of the child.

For these causes I am disposed to look for some sense other than pure reason, for mental exercise of a less onerous nature to explain the facts. Instead of a desire to account for the origin of the life of her child, I will suggest that the thoughts of the primitive mother would more likely be directed towards its individual peculiarities and the possibility of influencing them or of accounting for them. In the next chapter I deal more fully with the mother's instinctive appreciation of the individual peculiarities of her offspring : capacity for such discrimination is an innate maternal characteristic, all the higher animals possess it. There is nothing abnormal or remarkable about such discriminating power, and in human beings it is ever associated with 'hope', that is desire that certain qualities will be possessed by the offspring.

Here, then, we have some ground for believing that a pregnant woman will be impregnated also with desire. She may for her own purposes desire to confer upon her child certain particular qualities, and it is not difficult to imagine that she should seek for those qualities in the natural objects around her ; that she should be impelled by the sick fancies of pregnancy to believe that the spirit which per-

meates some living animal or plant enters into her and confers certain qualities upon her child. By such means the totemic idea may have arisen. Whatever totemism has come to mean to these Banks' Islanders now, I suggest that it arose, not from any feeling of necessity to account for the life of the child, but from a maternal anxiety, stimulated, exaggerated perhaps by sick fancies, to bestow some particularly desirable quality or qualities on her offspring.

I would once again assert my strong belief that savage life inculcates shrewd observation, that skirmisher of intelligence. The power of correlating facts may be very slightly developed and yet the facts themselves may be clearly known. Thus the variability of human characteristics cannot have been overlooked. A man is specially active, strong, brave, fierce or gentle; a woman possesses some particular form of beauty which renders her attractive to the Male, or she is peculiarly adept at finding some special form of food, or capable of withstanding privation, of producing strong offspring, or what not. These facts will certainly be recognised by every one who comes in contact with the individuals in question, and the capacities which are of advantage or the qualities which are admired will certainly be desired. Even the most primitive individuals will undoubtedly possess capacities which enables him or her to judge of such things in others, and to appreciate the value to the individual, and even to the community, of such special qualities.

But we may go further; the pride of a mother in her offspring is a primitive maternal attribute. Animals undoubtedly show special consideration for particular members of a litter of young. A bitch or a cat will take obvious pride in one particular puppy or kitten, will feed it at the expense of the others, tend it with peculiar care, even favour it when at play; and such special attention is constantly seen to be accorded to the little one which possesses some peculiar quality. Thus, a half-bred black cat, bred out of a common cat by a Persian father, produced one kitten in a litter which had Persian characteristics. She took special care of this kitten, allowed it to suckle her when she would not permit any of the other kittens to do so; when she was disturbed soon after the birth of the young it was this kitten she carried away in her mouth and attempted to hide; she showed, in fact, quite unmistakably her special pride in it. A human mother, then, will not fail in this respect, and as she bears only one child at a birth and is conscious of the growth of that child within her long before it comes into the world, her pride in it will arise as soon as she knows of its presence and will wax as the embryo grows. In other words, she will come to 'hope.' For what? For a child of which she may be proud; for one possessing special qualities which shall be of value to it, to her, or to the tribe. And now, having such desire, how can she compass it? The sick fancies peculiar to pregnant women may indeed then come to have practical significance for

her, none the less perhaps if she cannot control them, if she cannot choose what spirit animal or plant becomes responsible for the result; just because she cannot do so infinite possibilities are open to her child. What a vista is here spread out for maternal imagination and superstition to roam in!

If this be the case, totemism, as it exists to-day amongst these people, may be looked upon as having been developed in close relationship with the peculiar attributes of a series of surrounding objects; and such relationships may have originated in consequence of the belief that the child was endowed with certain qualities derived from an external object just as well as if the child was supposed to *be* that object. Indeed the latter belief, in my opinion, must have arisen subsequent to the former. And there is actually some evidence for this view as I will now show.

The Central Australian savages believe that what passes into the mother is not actually an animal, plant, stone, or what not, but the spirit of a human child which has one or other of these objects for its totem. Observe that in this case the host may be either an animate or inanimate object. Thus the offspring is not supposed to be an animal with a superficial resemblance to a human being, but a human being derived from the spirit of one dead and waiting to be born again; and by this means the Central Australians still determine the totems of every man, woman, and child of the tribe (vol. iv. p. 57).

Here, then, some discrimination is shown by these most primitive people. It is not the thing itself which enters into the mother, it is some part only, some quality of which the totem was temporary host; it is that quality which is conferred on the child by means of the spirit of one dead. That this quality has come to mean the actual life of the child will be, as I have said above, a subsequent development of the original idea.

If this view be right, the Central Australian belief would appear to be the more primitive of the two, and this conclusion is not without importance. Dr. Frazer's theory of the origin of totemism entails the necessity of believing that the most primitive form of totemism is possessed by people (the Banks' Islanders) who in another respect are distinctly more advanced; while the most primitive savages (the Central Australians) are supposed to possess a less primitive form of totemism. I have already pointed out the contradictory nature of this conclusion and it is not without interest to observe that the theory I suggest is free from any difficulty of this kind. If this be so, the exceptional case quoted of the Loritja tribe would indicate that some development of the original idea has already taken place amongst the Central Australians themselves.

I conclude then, that while totemism may rightly be supposed to have its origin in the sick fancies of pregnant women, such fancies originally had reference not to the cause of life in the child but to its

individual qualities ; subsequently the superstition grew to include the child's life, and finally the totem spirit was made responsible for the creation of the child. The infinitely gradual growth of this superstition banishes its origin far back in the history of man, while its dissolution, of which perhaps the first indication is shown by the Tully River blacks, is still not universally effected amongst civilised peoples.

It may be argued that the persistence through long ages of the belief that women may be impregnated without the aid of man is in itself evidence that it arose from ignorance of the true cause of conception. But to argue so is to place man's intelligence below that of the lower animals, and to my mind is absurd. The universality of the belief is however of profound interest as evidence of the power of superstition to swamp truth, while the efforts made to throw off the bonds are no less noteworthy. The various acts of the Central Australians, which indicate knowledge of the true facts regarding procreation for all living things while they deny them for all ; the retention of the superstition by the Tully River blacks for man alone, and their acknowledgment of the truth in the case of the lower animals ; the retention of the superstition by the Banks' Islanders, while they recognise the human father's part in procreation of offspring ; the behaviour of the Baganda people, in spite of their knowledge that procreation in man is the same as in animals ; the various beliefs of

ancient historic peoples that individual women may conceive otherwise than by the aid of man ; and the final Christian belief regarding the origin of conception in one solitary woman ; are all evidence of the slow waning of the power of a superstition which arose from a Feminine idea, an idea based on desire for her own or for her child's advancement, and which became consolidated by belief in the power of the gods.

But in face of what we know regarding the behaviour of breeding animals, and in face of the knowledge of the truth which everywhere underlies the actions of all human beings in relation to breeding, this persistence of superstition is not evidence of original ignorance but of the power of imagination when directed by some purposeful intent. In a general sense the waning of this superstition is coincident with the augmentation of woman's power in society, and, if I am right in my derivation of its origin, it should be found that the degree of maintenance afforded the superstition throughout its life is correlated with woman's necessities.

I am aware that such method of argument may clash not infrequently with accepted theories of the origin of a variety of superstitions. It is beyond my province to attempt discussion of such a point, though I may say it seems not improbable that in some of these cases also discrimination between the origin and the development of the superstition may have been hardly sufficiently insisted upon.

Huxley, in the prologue to his volume of *Essays*

on Controverted Questions, pointed out that 'From the earliest times of which we have any knowledge, Naturalism and Supernaturalism have consciously, or unconsciously, competed and struggled with one another; and the varying fortunes of the contest are written in the records of the course of civilisation, from those of Egypt and Babylonia, six thousand years ago, down to those of our own time and people.' The case we are considering dates infinitely further back than six thousand years, but the problem is the same as that he refers to. The varying fortunes exhibited in this battle between knowledge and superstition, between observation, intelligence, and imagination, are precisely what we have to reckon with in this case; that is clear enough, what is not clear is the character in which these primeval records are written.

There is only one reflection I desire to offer on this matter. We are continually finding buried truth, digging up evidence of knowledge which has been acquired and then trodden underfoot; we are continually discovering that what we supposed to be new facts are not new, that they were known long ages ago. We express this by the phrase, 'There is nothing new under the sun': it is a common experience in almost every line of investigation. Such knowledge has doubtless been lost because no use was to be found for it; its inanition is due to neglect, and some of it was surely buried by superstition, or discarded and lost because it was overridden by superstition. But in such cases, also, it

is clear that the birth of superstition was not due to ignorance of the facts, but rather to failure to correlate them one with the other, with failure to understand their true bearing. The superstition did not arise from ignorance of the facts; there is no sign of want of observation. Quite the reverse. The power of observation is demonstrably remarkable, the facts were actually known, but they were neglected on account of faulty intelligence, and imagination attempted to supply what intelligence failed to afford.

So, it seems to me, that in treating of the origin of superstitions, error has probably not infrequently been made because the difference between the power of observation and intelligence, the latter being the power of correlating facts, has not been kept clearly in mind. And I think Dr. Frazer's arguments are not wholly free from such source of error; I think he sometimes neglects or undervalues the power of observation, that he is disposed to assume ignorance of facts which are really known though they have been swamped by superstition.

To understand the cause for the ignorance the Australian men now profess regarding the part played by the father in the production of children, takes us to other ground. I understand Dr. Frazer believes that it is by means of the theory of conceptional totemism that the building up of the elaborate totemic system of the Australians is rendered possible. If this be so then the man had a definite reason for professing ignorance of paternity; and the

probability that such reason still exists is supplied by Roth, quoted above, namely that the theory of impregnation by spirits confirms the belief of man's superiority over beasts. As I have already remarked, the desire to believe in human superiority is an inherent quality of the human mind. Thus the man will readily be brought to acquiesce in the Feminine idea, and by the aid of man totemism will grow, greatly to the woman's advantage, for thus her importance as a member of the community is assured. She is now a very essential part of that community.

Again, it may be held that as totemism curtails the errant Male and his free exogamous habits, it must be a strain for man to support it. I think it probably is so, indeed it surely is so, for whenever opportunity offers he breaks free again and resumes his exogamous wanderings in spite of totemism and its forms and restrictions.

But even when he supports totemism in spite of the strain on him, the fact that man accepts the situation is not a matter for surprise: the complacency of the Male towards purely Female habits and schemes is a characteristic of the Male sex, and is constantly shown throughout the animal kingdom. Such complacency is perhaps associated with superior bodily strength, but I think it is not entirely due to that; I think his superiority in intelligence is also manifest. If I read history aright, man does not only acquiesce in, but constantly seeks to utilise the aspirations of woman, with the inevitable result that where the Male retains his vigour

he ultimately assumes the direction of the schemes the woman initiates.

Thus, in this matter of exogamy and totemism, essentially antagonistic principles, the former being a Male and the latter a Female creation, there is nothing extraordinary in the fact that the Male should accept the conceptional theory of totemism, and even that he himself should be responsible for its development into the intricate system practised in Central Australia; for while totemism had its origin in the Female mind, there can be no doubt the Male is chiefly responsible for its development. We may, under the conditions in which we live, find some difficulty in appreciating the advantages of the restrictions on mating he weaves around himself, but that they are suitable for the environment in which he finds himself we may be sure, since, as Dr. Frazer shows, where a different environment exists he breaks through the laws he has himself made.

But it is highly probable the restrictions on mating are nowhere so onerous as they appear on paper; the example given of the Baganda shows how easily they may be disregarded where only one totem spirit has to be considered. Amongst the Central Australians there are many spirit areas, any one of which may be made responsible for conception, and the ease with which the errant Male of one totem class can mate with the Female of his own or any other totem class, if he keenly desires to do so, without running great risk of discovery, is indefi-

nately increased ; the theory of conceptional totemism ensures this.

I do not suggest that the law is thus commonly ignored, I merely point out the ease with which it certainly can be circumvented : and knowledge of such facility for licence is surely not absent from the mind of the Male who made the laws. As a rule it is I think to be expected that such laws are observed with remarkable constancy, for they are based on superstition which is a most powerful aid to the observance of law, and as they grow very slowly they may well become firmly consolidated by long custom.

For such reasons I find it impossible to accept the conceptional theory of totemism as evolved by Dr. Frazer ; and I find I am not alone in scepticism. Dr. Frazer very kindly sends me (MS.) word of an experienced missionary who has lived much among the Melanesians and Polynesians, who also rejects his theory. 'I have lived,' he writes, 'among natives for many years and I have never even heard of any doubt whatever as to the connection of pregnancy with sexual intercourse' ; and, speaking of the Samoan genealogies, he says : 'Whatever value may be attached to these traditions it is certain that they are very old and that there is no trace in them of any ignorance in the far past of the part played by the Male in the generation of the offspring.'

There is certainly indication here that ignorance of the result of sexual intercourse is not necessarily

an attribute of primitive man, and it lends force to the suggestion that the Australians' professed ignorance of fatherhood was originally assumed for a purpose, whether they have now come to believe in it or not.

When dealing with exogamy, I ventured to express the opinion that in deducing its origin from a belief in the evil effects of incest Dr. Frazer ignores the constructive power of one of the most primitive and forceful of human instincts, the sexual instincts of the Male. In the case of totemism I cannot help feeling that in a similar way he neglects to pay due regard to another primitive quality of man, his power of observation, and that his omission to do so has resulted in the elaboration of a theory which necessitates the belief that the faculty of reason, or in other words intelligence, precedes that of observation, a belief which I find wholly untenable.

But to me the most interesting results of this inquiry are the proof that both exogamy and totemism have arisen in relation to, and in consequence of, the physiological laws which govern the generative system; and the demonstration they afford of the effect on society of the radical differences which exist in that system in the Male and in the Female.

The relation of the habit of exogamy to the mating habit has, as the word implies, always been recognised, and I have endeavoured to show that it is derived from a purely Male sexual impulse.

It is to Dr. Frazer we primarily owe the conception that totemism is also founded on reproductive

phenomena and that it emanates from the Feminine mind.

That these generalisations are true is strikingly shown by examination of the radical sex differences referred to; although rarely recognised in their entirety they are fundamental laws of sex.

The sexuality of the Male and Female are on quite a different plane. To the Male the gratification of the sexual impulse is the ultimate end of his generative instinct, beyond that he has no interest; the production of spermatozoa is the sole business of his generative metabolism and with the deposition of it his concern in the matter of procreation ends. Paternal care of the young and the affection which follows its practice is an acquired habit.

Not so with the Female. The ultimate end of her generative instinct is the production of offspring and their nurture; maternal care of the young and maternal affection is an attribute of the Female sex. The brief periodic sexual impulses which the Female experiences are merely a means to an end, to the production of offspring; they are an adjunct to, not even absolutely necessary for procreation, and they are certainly of very minor importance to her. Her generative metabolism is essentially concerned with the production of ova and the rearing of the embryo; her sexuality is a means of attracting the Male, a means of ensuring maternity, it is nothing more than that to her.

Thus totemism is in no sense dependent on sexuality, it is purely a maternal scheme; as a Feminine

creation it could not have reference to anything else, and, as Dr. Frazer shows, it has reference to nothing else. My endeavour has been to show that totemism is more nearly related to the yearnings of maternity than Dr. Frazer imagines, that it emanates not from any philosophic imaginings, but from the natural desires, the natural hopes of the prospective mother.

The Banks' Islands woman who believes that the spirit of an animal or plant invades her and that her child actually is such animal or plant in human form, nevertheless fully recognises the part the human father of that child plays; and that being so, it is clear that while the human father is recognised as the being who is responsible for the existence of the child, the spirit may be credited with the power to determine its characteristics. The child *is* a tree in human form; that is to say, the human form is due to the man and woman while the spirit of the tree has set an indelible seal on its character. The motive here which guides the imagination of the woman, it appears to me, is not due to any feeling of necessity to explain the fact that the child lives, but rather to find some physical explanation of its individuality or of its characteristics.

In the same way, the form of totemism in vogue amongst the Australian women may with equal probability have *arisen* originally from the same motive. The spirit of a dead person inhabits a rock or tree or animal, and from such temporary host invades a woman. Again, as in her still more primitive state she certainly associated the existence

of the child with the man who impregnated her, it is clearly not the life of the child which now requires explanation though its qualities may justly be cause for imaginative wondering.

It may be asked, Why should a woman who recognises the part played by the father of a child seek for extraneous agents to explain its characteristics? Supposing these people have sufficient power of observation, as I believe they have for long ages possessed, they will have noted that a specially powerful man may beget a weakly child, or a small father may be responsible for a big son; they will have observed that there is no certainty such paternal qualities will appear in a child. A son may be and probably will be like his father in many ways, for many reasons he obviously belongs to his father, but there is always something different between them, the son has always got some quality or peculiarity which his father does not possess.

I have already indicated how readily and with what force a mother may desire that her child should possess a definite quality; when such desire, such hope, is fulfilled, as no doubt it is fulfilled not infrequently, what is more natural than that it should be believed that some extraneous influence is responsible for the fact? But even if desire is a much less prominent characteristic than I have supposed, and even if the power of observation possessed by these people is of much lower order than I have claimed for them, the argument I advance is not endangered. The child who is sup-

posed to be a kangaroo in human form must possess kangaroo qualities even if they are not to be seen. Such supposition is, I take it, the essence of the belief; the kangaroo man eats kangaroo flesh in order to be more like that animal; or he refrains from eating it because he is a kangaroo, and to eat its flesh is to behave as a cannibal. Under any or all of these circumstances a belief in the power of the spirits to affect the constitution and characteristics of the child is clearly admissible; but under none of them, so far as I can see, is any substantial reason advanced for the existence of an *original* belief in their power to effect conception. The growth of such primitive ideas into the belief now held by so many of the Australian peoples, that the actual life of the child is due to a spirit, has been already dealt with; it is not difficult to imagine.

It is from this belief I think that the belief held by the Slavonian peasants must be derived. In this case, as I have already urged, the belief is probably not that the spirit invoked actually fertilises the woman but that it stimulates her reproductive power; and that recourse is had to such spirit for precisely the same reason as recourse is had by the Australians to the ceremony of Intichiuma, anxiety to aid fertility not to substitute something else for it. When the Slavonian peasant bears children normally she does not by ceremonial observances call in the aid of tree and fire spirit, and when she does call them in she does not neglect to cohabit with her man. Where the Australians live in a region where the supply of

food is precarious, the Intichiuma ceremonies are strictly observed; but where they live in a productive region and the supply of food is in no danger of failure, they are not performed, there is no occasion for these practices. I fail to see any indication in either of these cases of the belief that reproduction is effected by these spirits, while on the other hand there is, I think, ample justification for the theory that they are credited with the power to induce fertility.

It follows, if I am correct, that just as exogamy is a practical effort to satisfy a Male sexual impulse, so totemism arose from a desire, is designed, to satisfy a Female maternal impulse. These two divergent impulses are at the root of sex antagonism; they exert their influence on all the laws which govern sex relations in all social communities, and are never divorced from the minds and from the actions of all normal healthy men and women.

As I have several times stated, the generative system is one of the two most primitive systems of organs we possess, and its influence on all the other organs of the body is profound. To neglect the effect of such influence on the habits and customs of primitive man is to neglect the working of a fundamental law of Nature; to attribute to intelligence what is really the result of an impulse of Nature, to hide the latter under a more attractive layer of philosophic reasoning, is to take a hand oneself at that spade-work which has so constantly in the history of man resulted in the burying of truth.

VI

MATERNAL IMPRESSIONS AND BIRTH-MARKS

DR. FRAZER indicates possible grounds for the association with his theory of conceptional totemism of the beliefs, which are widely held, of a connection between maternal impressions and birth-marks. He says (vol. iv. p. 64) regarding this 'theory of conception which appears to be the tap-root of totemism, it seems probable that, as I have already indicated, a preponderant influence is to be ascribed to the sick fancies of pregnant women,' it being 'well known that the minds of women are in an abnormal state during pregnancy'. He gives instances of the supposed association of birth-marks on the body of the young with maternal impressions, and also of the belief that external objects can affect the young of animals through visual impressions made on the pregnant mother, and he remarks that if such beliefs be proved to be true, they would, in a sense, supply a physical basis for totemism. But, he adds, 'all this must remain a matter of speculation until the fundamental question of the possible influence of a mother on her unborn child has been definitely answered by biology' (vol. iv. pp. 69-70).

I cannot pretend to have any definite biological

explanation to offer for this belief in the power of the mother to affect the tissues of her young by means of mental impressions, but there are certain points in connection with that belief which may be, I think, of some interest in connection with totemism.

Certain peculiar marks or blemishes on the skin of children at the time of birth are commonly called birth-marks. They may be marks which more or less quickly disappear, or they may be permanent blemishes. Such marks may be divided into two classes, those which are clearly, directly due to physical causes and those which are not.

As an example of the first class I may quote a case related to me by a doctor who attended the patient concerned. A woman while pregnant fell downstairs; she told the doctor she was sure she had marked the child's head, and when the child was born it had a large hairy *nævus* over nearly the whole of one side of its head. The woman had no idea of the kind of mark she expected to see on the child's head, she was only confident its head would be marked; and if it is perhaps somewhat remarkable that the site of the damage should be so confidently foretold by her, it is still quite possible she may have had sufficient reason for that belief, for there can be little doubt that in this case the mark was due to damage directly inflicted on the embryonic tissue.

Such birth-marks, which may be attributed to physical force acting directly on the embryo, are

quite different from those I deal with below ; at the same time the line which divides these two classes is not always sharply marked. It is not always possible dogmatically to assert either what can and what cannot physically affect the embryo, or what form an injury so inflicted will take ; thus there is wide scope for the play of imagination and for its unwitting encroachment on the realm of fact. Nor can one be surprised at this, for birth-marks of the second class, which are perhaps more frequently recorded and are certainly much more remarkable than those of the first class, are supposed to be solely due to imagination ; so far as I know, no other kind of explanation has ever been maintained.

Regarding these birth-marks of the second class, there is a very generally expressed opinion on the part of mothers that, where not referable to any physical force acting directly on the embryo, birth-marks are due to some strong impression produced on their own mind and stamped on the child during pregnancy. Such mental impression may or may not be associated with physical force applied to some part of the body of the woman far removed from the embryo, say her arm.

This opinion was probably much more common a few years ago than it is now, but it still persists, and, I believe, to a much wider extent than is generally credited. These old-fashioned 'explanations' of phenomena which are not understood die hard. Science is so insistent, it carries such weight and sets its seal so heavily on its disciples that a suffi-

ciently generous tolerance of old-fashioned beliefs is rare ; and this is a pity, for some of these beliefs are of great interest, may even be of great importance, and those who hold them are thus rendered shy of expressing them ; though they may still be widely and very firmly believed, it is extremely difficult to get information about them. I think this is the case with maternal impressions and birth-marks.

A sudden physical impression produced by contact and attended by fright is especially believed likely to originate a birth-mark, although any vivid mental picture presented under startling conditions may be made responsible ; or even a peculiar habit of the mother during pregnancy such as the craving for a particular kind of food, which is a common experience of pregnant women ; or the insistent longing for the presence beside her of a particular person or thing may be adduced to explain a birth-mark ; or perhaps certain physical characteristics, peculiar to that person or thing, which are reproduced in the child.

I will give examples of such cases :

1. A lizard falling from the ceiling on to the bare breast of a sleeping pregnant woman, at dead of night, caused sudden fright and, temporarily, great mental disturbance. The child was born shortly afterwards and, as the mother predicted, had a red mark on its chest which was like the imprint of a lizard's body and extended limbs, and of similar size. The event happened in China, and the hus-

band, my friend Captain Whithers, who was present, assured me of the truth of the story.

2. The husband of a woman who was near her confinement was suddenly brought home from work with an arm fearfully lacerated and damaged by machinery. The sight was a great shock to the wife. The doctor who attended the husband attended also the woman when her child was born, and he asserts there were marks on the one arm of the child similar to those the mother saw on the corresponding arm of her husband.

3. A mother who had a great craving for raspberries during pregnancy bore a child with a very distinct red mark of a raspberry on its body. The sister of this lady, for whose punctilious accuracy I can vouch, assured me that the resemblance of this mark to the fruit of the raspberry was extraordinarily clear.

4. An officer was severely wounded in battle, he had eleven wounds; two were parallel sword-cuts across the back of his neck, high up, dividing all structures down to the *ligamentum nuchæ* which was notched. These wounds resulted in two broad, indented scars. He also had a sword-cut which split his nose longitudinally from the forehead. The other eight wounds were hidden by his clothing.

He was engaged to be married, and was invalided home, when his fiancée first saw and was greatly shocked at the scars on his neck and face. He married shortly afterwards, and the first child was born with two red lines across the back of its neck

exactly corresponding to the position of the scars on its father's neck, and a red line down the nose following even the same irregular course of the scar on its father's nose. The marks were broad and livid at birth but gradually faded and disappeared altogether in a few months.

The truth of this story is vouched for, in a letter which I have seen, by the medical man who attended the wounded officer and who saw the marks on the child.

5. A friend of mine, a doctor of conspicuous scientific abilities, tells me of two cases of pregnant women who were frightened by an idiot man. In both cases the child when born was mentally defective, and both children are now grown up and are still mentally defective. The doctor knew both families well and had known them for many years. Both women had already produced several perfectly normal children, and in neither case was there any evidence, so far as he could discover, of congenital mental defect. The women were not related to one another, it is believed they were not even acquainted with one another, and the fright did not happen to both of them at the same time.

In one of these cases, the child when grown up constantly imitated in an unmistakable manner certain peculiar actions of head and arms, of the nature of contortions, which were marked peculiarities of the idiot man who caused the fright to its mother. The doctor knew the man well also.

6. The *British Medical Journal* of 4th May 1912

publishes a statement made by Dr. T. H. Harris (Mildenhall), as follows :

‘About forty years ago I attended at Holywell Row, Mildenhall, a single woman in her confinement, and the child when born had an amputated arm above the elbow, and also the appearance of the insertion of five stitches. The scar simulated a circular amputation, and the stump appeared somewhat conical. Parentage was not denied by a retired soldier, who had an amputation done on the same arm (the left) at the same site and in the same manner a short time previously. I examined the soldier’s stump and can vouch for its exact resemblance to the baby’s.’

Examples of the reproduction of maternal impressions on the skin of the child might be indefinitely multiplied ; they are all examples of the reproduction of a mental image.

How long these marks persisted on all of these children I do not surely know. It is not impossible that the length of time birth-marks persist may prove to be important as a means of differentiating between them, but so little is known about them at present that such analysis is not possible now.

The examples given in (5) and (6) are still more remarkable however, for in these cases the influence is represented as permanent. So far as (5) is concerned, I am disposed to think it is highly probable that transference of maternal mental impressions is much more common than is generally believed. The possibility that such maternal impressions may

be responsible for recurrent mental visions and for periodic attacks of mental illusion in the offspring is suggested; illusions which may quite well be explained by physical conditions of brain tissue. Reliable evidence on this point would be of great value.

In relation to this aspect of the question, my friend Dr. Mott writes me that he has observed in women who have a large family and who have had only one attack of insanity, that the child which subsequently became insane was frequently the child born at the time the mother was mentally affected or actually insane about that time. Thus, if a mother is specially liable to transmit pronounced mental defect at the time she herself is suffering from it, there is some reason to expect she may also be liable to transmit the resultant of any other mental condition she may experience.

In the cases of insanity referred to by Dr. Mott one may perhaps assume that the fit of insanity experienced by these mothers was due to qualities hereditarily transmitted to them; but the fact that the children who subsequently suffered from insanity were frequently those in course of development at the only time their mothers actively experienced the effect of this hereditary taint, indicates that a mother is specially liable to transmit what she herself experiences during her pregnancy.

Of course it is undeniable that innumerable pregnant women do experience fright or vivid mental pictures of the kinds described, after which the child

is born without any trace of birth-mark. Doubtless the same woman may transmit an impression to the child at one pregnancy and fail to do so at another. I think it cannot be denied by the most convinced believer in the effect of maternal impressions on the unborn child that examples thereof are comparatively rare. But it may be held, not without reason, that this fact is not opposed to their belief, because it may confidently be maintained that the degree of fright is determined, not by the actual occurrence but by the tenseness of the mental condition of the subject at the time she is affected, by the condition of her nervous system at that time. She may be very highly strung, or her individual capacity for the graphic recognition of such startling occurrences may be especially acute, or her power of transmitting the same may be markedly strong. If so, she will be more liable to receive impressions and to transmit them than if she were of phlegmatic disposition, or stupid and unobservant.

Granting this, and I do not think it can be denied so far as variability of capacity is concerned, that either individual variability or variability of the same individual at different times exists, the chief stumbling-block to acceptance of the belief as a whole lies in the inability to discover a vehicle for transmission which will satisfy the scientific mind.

I know of no scientific explanation of the phenomenon as stated. So far as I am aware there is no physiological connection between the mother and the embryo which admits of the possibility of the

transmission of maternal impressions to the child by direct means. There is no fusion of maternal tissue with the body of the embryo, no nervous connection, no contact of any kind one with the other. The only means whereby the embryo participates in the life of the mother is through the placenta, and that organ functions solely as a filter, whereby the blood of the embryo becomes purified by the excretion of the waste products of its metabolism into the maternal blood, and becomes recharged with nutritive material from the maternal blood. But the blood of the mother does not flow into the vessels of the embryo, the interchange of material to and from the one to the other is effected through the placental tissue.

Thus the only connection between mother and child is by means of the nutritive material she provides, and, from a very early stage of development, that is filtered through the placental tissues. It is difficult to entertain the suggestion that mental impressions can be so conveyed, and, if such are transmitted, the vehicle of transit seems likely to be of a nature quite different from any known physiological mechanism.

Similar conditions pertain to the ovarian ovum, the only direct relation of which with the mother is through the nutritive material conveyed to the ovum by means of the follicular cells. Certain of these follicular cells are attached by fine threads of protoplasm to the zona pellucida, a thick membrane which surrounds the ovum and which is per-

forated by fine canals, but whether these threads come directly into contact with the protoplasm of the mammalian ovum or not is doubtful.

It seems clear, then, that the only physical means whereby external influences can reach either ovum or zygote, apart from direct physical force transmitted through the walls of the uterus, is through the nutriment supplied to it; and the only method of affecting that nutriment is by changing the metabolism of the mother. In order to prove that physiological influence is exerted it appears therefore necessary to show that the metabolism of the mother is so greatly affected by the results of a maternal impression that the food conveyed to the ovum or zygote is charged with a stimulus sufficiently discriminating and sufficiently potent to induce the necessary changes therein.

An alternative has been suggested by Mr. Andrew Lang in his article in the *Spectator* of 26th August 1911 (p. 305), namely that the phenomenon is due to the exercise of psychical force, but for this theory there is absolutely no evidence, so far as I know. If there is any truth at all in the occurrence of birth-marks, their origin must be sought for in the physical forces which effect changes in the nervous tissue; through such agency it is conceivable that correlative changes in somatic tissue may be brought about.

Dr. Mott writes me he is not disposed to deny the possibility of the transference of certain maternal mental impressions to the developing zygote. He

holds that 'an impression which may have little or no lasting effect on the mind of one individual may in another exert an influence for a long or even an indefinite time. Thus an emotional shock causing terror and a fixed idea, especially if it results in hallucinations and delusions, may, by its being the chief content of consciousness and the central focus of attention, become the main source of katabolic processes. If different modes of motion are the physical expression of different mental processes, in such case the modes of motion are comparatively very limited in kind and are continuous. It is not inconceivable that similar structures in the mother and the developing embryo may enter into bio-rhythmical correspondence so that a tendency of the offspring to develop a similar form of mental disorder in later life may be established.' Dr. Mott adds that 'the proof of this hypothesis can only be given by the collection of cases free from all the many sources of error and doubt with which they are likely to be enveloped.' That is, of course, true; the fact, however, remains that on such high authority we may entertain the possibility that an external force acting on the mind of the mother may be conceived to reverberate in the developing zygote, and to cause in it the same vibrations experienced by the mother who transmits them. In the same way and for the same reasons I gather that, if such vibrations be transmitted, they may also be stored in and may cause continuous action of the nervous system of the embryo, in which case they may give rise in the

child to the same hallucinations or delusions which affected the mother. If this be so it is also possible that these mental affections may induce bodily habits, movements, even contortions associated therewith, and thus the instances given in (5) might be explained. In the cases Dr. Mott himself supplies, while a focus is probably hereditarily transmitted, it seems probable that there is also a special cause for irritation in the child's brain which is due to and derived from the actual condition of the mother's brain during pregnancy.

Again, the transmission of the effects of mental disturbance from one individual to the mind of another by means of other than the ordinary channels of the sense organs, is claimed to occur, and may occur by physical means if the receptive power of nervous tissue in any part of the body is sufficiently acutely responsive to reverberations. Further it is also undoubtedly possible for an individual to produce a physical effect on his own tissues by transmission of a stimulus which is solely derived from mental impressions, acting on their nervous substratum.

A blush which is caused by a word or a glance is an example of this latter fact. I once saw a lady who, for all she knew, was alone in one of the rooms in the Wallace Collection, and who, after gazing for some moments at Frans Hals' picture 'The Laughing Cavalier,' turned away from it in some confusion and with a blush on her face. The portrait is wonderfully suggestive of licence and of male

virility. Again, I am assured by an acquaintance of a lady that the latter can warm her feet when they are cold, by thinking of them. A still more remarkable example of a similar exhibition of such power is afforded by the experiment whereby a blister was produced on the back of a patient by means of a piece of brown paper, together with the belief conveyed by the physician, in words, that the brown paper was in fact a mustard leaf. But it is required for our purpose that the physician should convey the impression he desired the patient to receive without words, by thought transference, in order that the analogy with maternal impressions of the kind we are considering here should be complete. I know of no case of that kind, unless indeed it be contained in faith-healing.

It seems probable that the development of psychic therapy now taking place will lead to the acquisition of very interesting and important knowledge which may bear upon this subject.

If maternal impressions are conveyed to the offspring, and if the medium by which they are conveyed be of the nature already indicated, one would expect that the occurrence should become more frequent as civilisation increased, as the mind became more receptive, and as the power of mental effort became more acute. Whether such has been the history of the belief or not there does not appear to be sufficient evidence to show, but it is at least remarkable that we do not hear of maternal impressions and birth-marks as a universal belief among savage

peoples; and if it had been universal we should probably have heard of it. I will refer to this matter again below.

It may be claimed that in order that such effect should be produced the brain of the recipient must be fully developed to admit of the reception of the impression, and if that be true it is impossible that the brain of the embryo can be developed to an extent necessary for such receptive quality at the time, at the stage of growth, when it is alleged that maternal mental impressions are so conveyed. But is such a claim justified by what is known of the phenomenon of the transference of ideas by any means whatever? I do not think so; rather does the evidence available indicate that the brain of the recipient must be purged of all but receptive qualities; that the success of the process, so far as he is concerned, depends on the success of his effort to void all individuality; or, when it is involuntary, it depends on the sub-conscious condition of the recipient.

Receptive qualities are surely developed in the embryo brain prior to reasoning qualities, and it is quite possible that a very delicate receptive quality of brain tissue and a stimulating power enough for the purpose, are both developed at a sufficiently early stage in the life of the embryo; and if so, it is not inconceivable that strong maternal impressions may be temporarily represented in the child's brain by some such joint mechanism.

But if such explanation is possible for evanescent

markings, it does not offer any solution for the belief that permanent somatic characters are induced by maternal impressions; and yet such belief is undoubtedly prevalent. When a woman foretells that her child will be born with a withered arm because she herself has experienced some startling occurrence in which a withered arm played a prominent part, and when that child is born with a withered arm, the result is remarkable. The cases (1), (2), (4), (5), and (6) recorded above are of a somewhat similar kind. It is not enough to conclude that such associations are accidental because they occur in one woman and not in another. As remarked above, the one may be, nay, surely is, more susceptible than the other, and the association is too definite, especially in case (4), to admit of the hypothesis of accident or coincidence. It is astonishing to find how universal among our own people is the care exercised over pregnant women to guard them against sights and impressions which may produce strong feelings of anxiety, fear, loathing, or horror. Apart altogether from the danger to premature birth which such experiences may excite in women at a late stage of pregnancy, there is undoubtedly a strong conviction amongst a large proportion of women that the mental or bodily qualities of the child are in danger of infection at all stages of development.

On the other hand, the belief that minor blemishes are the result of maternal impressions is, I believe, still usual with all women.

There is I think no difference in the mother's mind between malformations and blemishes ; they are both a matter for bitter regret ; probably both have been and still commonly are incentives to reproach. We may perhaps assume that in olden days such blemishes as could be hidden from the world would be regarded as of less importance in proportion to the opportunity for hiding them, while malformations demanded explanation and must have it if the mother is to escape censure. In more recent times, as the malformations became accounted for by science, they required no further explanation for those who recognised they were no longer a matter for reproach, and it is only the more remarkable unexplained birth-marks which stand out in relief. Perhaps this is why these latter still demand explanation for the satisfaction of almost all parents to-day.

I would here for a moment diverge from the human aspect of the subject. As a matter of fact the belief in the power of the mother to transmit mental impressions to her offspring during pregnancy, impressions capable of exerting permanent effect upon the somatic characters of the embryo, is not confined to the result of observations on human beings. It is a common belief of breeders to-day, and its origin must be relegated to a time long before history was recorded. It was accepted by breeders of domestic animals as an established fact in the days of Jacob, and persists to-day.

Jacob set about rods in which he had peeled white

strakes, where his flocks were breeding in order to ensure the production of speckled, spotted, and ring-straked offspring. He relied on maternal mental impressions to influence the colour of the offspring.

Oppian (*Cyneg.*, i.) records the existence of the belief, remarking, 'And then mortals devised other very cunning things, to mark the young foal even while in its mother's womb.'

A well-known breeder of black-polled cattle who lived in this country a few years ago, always insisted upon his fences, gates, farm-yard buildings, implements, and appliances being painted black, in order, as he believed, to ensure the production of black calves.

Moreover, there is a strong opinion among some breeders that maternal impressions made before conception is achieved, may persist and may be exerted on the embryo from the first moment of conception. Thus the prize poultry breeder who is careful to keep out of sight of his breeding hens any fowls which are badly marked, and the horse and cattle breeders who exercise similar precautions for their prize breeding animals, are examples of those who hold this slightly different but analogous conviction. It is not uncommon to find breeders who are absolutely convinced of the evil effect on their breeding stock of a badly-marked animal in a neighbouring pen or field. Critics would doubtless be tempted to attribute the fear of evil to the fear of possible crossing with the badly-marked animal,

but in the case of horses the fear is not less strong, and is equally carefully guarded against if the offending animal be a gelding, or if the breeding animal be already pregnant. Again, critics will probably suggest that the origin of the belief is due to the observed result of accidental crossing, the badly-marked animal having gained access to a thoroughbred mate without the knowledge of the breeder. This is a simple explanation but it does not satisfy those who, while taking efficient precautions against such accidents, still declare they get the same results. They may be wrong, but careful men of very wide experience still believe they have ample ground for their belief.

A large breeder of carriage-horses who wanted to improve the style of his young stock, used very handsome stallions; his mares were of somewhat inferior blood and he expected the sire to exercise a dominant influence on the external qualities of his offspring. But year after year he found to his great disappointment this was not the case, the foals almost consistently resembled their mothers. It then occurred to him that the result might be due to the custom in his stable of serving the mares in a dark loose-box, a custom he had adopted because it was found that there was less trouble in serving mares in the dark. He therefore had the mares brought out into the open yard and allowed them full view of the stallion for some time prior to and during the sexual act. He assured me that after this method had been adopted a

very large majority of the foals resembled the sire !

A precisely similar view regarding the means to be adopted in order to impress the father's external qualities on the human child has been held, probably for ages, and is, I understand, still commonly believed. It is not long ago since the method was included in medical text-books.

As an example of a somewhat similar phenomenon, I may refer to Fröhlich's paper (*Arch. Entwickl. Mechan.*, vol. xxix., 1911) on *Palæmon treillianus*, a decapod crustacean ; it is blue by day with chromatophores contracted, reddish-brown by night with chromatophores expanded. If the animal be kept in a white porcelain dish it becomes milky and translucent, the chromatophores being greatly contracted ; while if it be put in a glass dish on a mirror it becomes transparent, when a maximum of contraction of the chromatophores is observed. Naturally one assumes that the light, or the quality of the light, directly affects the chromatophores ; but if that is so it is not the only means by which they are affected, for, under one condition, they are not able to vary at all in consequence of change of light intensity. Fröhlich states that when blinded the animal assumes at first the reddish-brown, night colour ; after two to four weeks it becomes whitish, and after some months pure white ; whereas when the eyes are regenerated the normal colour is resumed. This is certainly not a direct result of light or of the colour of the background. I conclude

that the mechanism by which the power of vision can affect the chromatophores is contained in the nervous system, and perhaps we have here a comparatively simple example of that reverberation due to nerve metabolism, to which I have already referred.

It is hardly necessary for me to add that there is, so far as I am aware, no possible means of reconciling the opinions regarding maternal impressions which are so generally held, with the modern theories of heredity which it appears to-day almost impious to doubt, unless, indeed, transferred nervous reverberations can exert influence on the metabolism of the gametes. But however improbable, even however grotesque such views may seem to some, there is something to be explained; the cause at the back of this universal belief should not be ignored, for although it may have grown out of all recognition, that which gave it origin is quite possibly true.

So far as breeders are concerned, I find the lore of breeding is of astounding depth. The accumulated experience of breeders is immense in all old countries where for ages pastoral pursuits have been a fundamental part of the life of the inhabitants. Constantly one finds sound physiological reason for customs, the origin of which has for long been forgotten. My experience of breeders compels me to regard their methods with profound respect, and what science is apt to designate as their superstitions are, in my opinion, not invariably to be dismissed as such.

It would be of great value to science if anthropologists would more frequently include in their investigations of the habits and customs of peoples, facts which have relation to their methods of treatment of domestic animals, and records of their breeding lore. There is no essential difference between the laws of breeding of human beings and of their cattle. The natural incentives to, and the forces which stimulate breeding activity are the same for both, and are essentially governed by the same natural conditions. Among pastoral people therefore, it is surely not impossible that knowledge may thus be obtained which will throw light on the origin of the laws which relate to their own sexual habits and customs, and perhaps upon some of their most impenetrable superstitions.

To return to birth-marks ; there is another aspect of the question which might perhaps with some reason be suggested, and that is: Is it not possible the mother's desire to account for birth-marks by means of mental impressions received by her, may have been prompted by the disappointment occasioned by their occurrence, or by the need to escape responsibility and censure for their production ?

The desire of a mother that the child she is about to produce shall be without blemish is a very natural one, and it is not unreasonable to presume such hope is probably coeval with preferential mating—and love.

Again, no doubt this natural hope may have been further stimulated among certain peoples by the

fact that ever since the day when the coming of a Messiah was foretold, a vast number of women have hoped to bear the perfect child who alone might be the Messiah. Among Christians also, ever since Christ's reappearance was preached a similar hope has permeated women of every degree and, until quite recently, this has been the case for the majority of women in every Christian nation.

There is indeed abundant reason to understand the anxiety of a woman to bear a child without blemish, and it is equally certain that failure to do so will carry with it regret, or bitter disappointment, and even, in the minds of all but educated people to-day, some reproach. What is more natural then, than a desire to look for an extraneous cause for the blemish ; for a cause which has exerted influence from no fault of their own ; for a cause which, by preference, may be regarded as of sinister import, or of devilish design to rob them and their man of what otherwise might have been ?

There is no difficulty in imagining how such a desire might arise, and the readiness whereby it can be satisfied is no less surely attained by the acknowledged belief in the power of maternal impressions. Of course those women who experienced such devilish attempts to injure their offspring and yet produced the child without notable blemish, may well have congratulated themselves on their superior power of protecting their offspring ; but this will not prevent their less fortunate sisters from gaining such assistance from this source as is necessary for

their acquittance in the eyes of all, except, perhaps, in those of these same superior ones. Then, at any rate, it must be apparent that if some women can withstand the dread influence, and are immune from its evil effects, those who cannot do so may be inherently at fault. But, who knows, the capacity for overcoming the evil may be only temporarily held ; this one or that one succeeded once but failed afterwards ; it is unwise to boast, and certainly shows wisdom to support a belief to which it may at any time be needful to resort to as a refuge.

But, except from such point of view of utility, is it or was it always a conviction ? It is easy to persuade yourself to believe in a force which may be of such great value ; at any rate your mother believed it ! After all, is it possible the women themselves never did really believe it, that, except in very exceptional cases when they did not know what to think, it was, and is, as a rule, manufactured by them for marital consumption ? One must bear in mind the fact that in the days of its origin the chief claim of a woman to consideration lay in her capacity to produce children, while her renown was dependent on their quality ; that in those days a barren woman was only useful as a beast of burden, and one who produced faulty children doubtless an object of contempt, or even loathing, in the eyes of her lord.

Dr. Frazer objects (MS.) that a barren woman is ‘not simply a beast of burden. In savage society woman does much of the work of supporting the

family by collecting the wild fruits and roots and by cultivating the ground. At such a stage of society,' he says, 'there may be even an advantage in a barren woman; the less she is hampered by children, the more time and strength she has to provide food for her lazy husband.'

I see no point in this objection. Dr. Frazer's description of the position of a barren woman is precisely what I mean by a 'beast of burden.' No doubt she may be valuable to her husband as such, but what I am endeavouring to show is that, as a mother of strong, healthy children she is accorded advantages which are a great boon to her herself; since she is, then, largely exempt from performing much hard work which the barren woman is compelled continuously to perform, while the breeding-woman receives the benefit of it. No doubt the privileges accorded a mother vary greatly amongst different peoples, but one constantly finds that in savage societies women with child are specially cared for; it is not unusual to find they are isolated as soon as they become pregnant and remain isolated, or in the company of other women in like condition, until the child is born and the period of nursing is over; and that period may last from one to three or even four years.

Whatever may be the advantages a man extracts from a barren wife, to the wife herself—and it is to her position I am referring—it is undoubtedly advantageous to bear children; and further, I hold that the finer the children she produces the more will

she be valued as a wife. The husband may well object to lose the working services of a wife for the sake of a child which is the subject of ridicule, or which is in any way looked upon as unsatisfactory by his friends and those in authority over him.

Under such circumstances we can well imagine what a stimulus would be given to a woman to find external circumstances, some force—preferably of devilish origin—beyond her control, responsible for that blemish on her child which would otherwise infallibly be regarded as due to the hand of a justly angry God, or to a familiar evil spirit within her. Is it not possible the belief has arisen in consequence of woman's desire, urgent need rather, to find some method of shielding herself from contempt or reproach, some means of retaining those perquisites of the mother which made life just a little easier ?

Had we only human records on which to base our judgment, we might well be disposed to think that such desires and such necessities were enough to account for the woman's belief in the transference of mental impressions to the unborn child. Undoubtedly they must have exerted great influence on the woman, but, I think, only secondarily. The belief in the effect of maternal impressions on domestic animals is far too old, far too deeply rooted to allow of a moment's doubt that the same belief in the effect of human maternal impressions was other than genuine. It was taken advantage of freely, probably, but it was founded on experience

of what was believed to be fact, both by men and women, certainly.

There is still another form of maternal impression which is widely believed to be transmitted to the developing embryo, and that is the effect on the embryo of the general tendency of the life the mother leads during pregnancy, the atmosphere of that life. It is believed to-day that in accordance with whether the mother lives during pregnancy in the midst of quiet and beautiful surroundings, or whether she is embroiled in excitement, passion, and strained mental effort, so may the mental characteristics of the child be biassed. The father of Charles Kingsley believed this and acted upon it when his wife was pregnant with the child afterwards known as Charles. I am assured that a similar belief is still held by women;—from the earliest days of pregnancy they will take special pains to read only good literature, to play or sing or listen only to good music, to think only of pleasant things, and to surround themselves with flowers, pictures, and any objects of beauty. They will make special efforts to think out as clearly as possible any problems presented to them, whether they concern matters of moment or are quite trivial domestic problems, and will resolutely carry out any plan they may have made in spite of all inconvenience. The idea underlying such actions being that a love of beauty, good temper, and habits of thoroughness and integrity may thus be induced in the child.

Oppian (*Cyneg.*, i. pp. 328-67) remarks, 'Yea verily thus did the Laconians invent cunning things for their dear wives when their belly swells. They depicted on Tablets, and placed near them, glorious types of beauty, making resplendent the youths of former days among ephemeral mortals, . . . and they rejoice as they see the lovely form and bear beautiful sons as they cower in awe at the beauty.'

Definite proof of the action of such influences is wanting. So far as I know there are no recorded instances which are free from the interpretation that heredity, and environment after birth, are responsible for the result. At the same time it is possible that the forces at work are not thus limited.

The modification of types in accordance with environment is indisputable, but the discussion now going on upon this subject makes it clear that such influence, if exercised only after birth, must be prodigious in order to effect all which is laid to its credit. If however the embryo is affected by the mother in accordance with the conditions which are peculiar to her station and surroundings, in consequence of the effect upon her of her experience of them, the strain will be greatly relieved; and I am much disposed to think this is not improbably the case. In view of what has been said already regarding maternal impressions, such antedating of the power of environment is not an entirely unjustifiable supposition, and indeed the more one considers the matter from a variety of points of view, such as the connection of the ovum with the

protoplasm of the follicular cells, the more is evidence found to group itself round facts which indicate the possibility of a more far-reaching effect of environment than is usually conceded.

It must also be borne in mind that if the effect of environment can be transmitted by the mother to the embryo within her, in any way whatever, the plastic nature of embryonic tissue will vastly increase the relative effect of such influence.

Ballantyne—*Antenatal Pathology and Hygiene. The Embryo* (1904)—devotes a chapter to this subject. He is assured that the belief is of great antiquity and is prevalent amongst many peoples in every continent, and he considers it as probably coeval with the human race. At the same time, his earliest reference to it is that of Jacob. He then refers to the ancient Greeks. Plutarch states that Empedocles had remarked that women produced children resembling statues which they found pleasure in regarding during pregnancy. The law of Lycurgus required Spartan wives to look upon representations of the strong and beautiful. Diogenes of Syracuse hung a picture of Jason before his pregnant spouse. In the Talmud are similar stories indicative of belief in the potency of impressions made after conception. Oppian gives details of application of the belief in the breeding of horses and doves. In the Middle Ages stress is laid on the belief that infants resemble in colour things seen by the parents at the time of conception, and Ballantyne thinks that up to the end of the fifteenth century belief in the efficacy of

maternal impressions seems to have been confined to what was seen at the moment of conception. In the sixteenth century the idea was common, he says, while in the seventeenth century there was blind credulity, conception by imagination being believed possible, and even recognised in a court of law. In the eighteenth century sceptical criticism began, while at the present time he judges that the truth of the matter is not yet determined.

Such, in brief, is a *résumé* of Ballantyne's chapter ; many interesting stories are given by him, and many references, but we learn little of the origin of the belief, and little which can be read as for or against it. Originally he thinks the belief was used to explain how the young of men and animals came to be of special colour, especially how they acquired a tint which was different from that of the parent. Then it came to be used to explain the occurrence of 'mother's marks,' and was finally drawn upon to account for malformation. He apparently does believe that the state of the mother's mind during gestation affects the development of the embryo, and refers to the marked bodily and mental stigmata to be seen in many children conceived during the siege of Paris—'enfants du siège,' as they were called. On the other hand, he is not prepared to believe that maternal impressions ever cause defect in the foetus closely resembling the thing producing the impression, though, he adds, rarely a case occurs which it is difficult to explain away.

It is precisely this desire 'to explain away'

evidence which is in favour of the occurrence of the transmission of maternal impressions to which I take exception ; it is a usual attitude of the scientific mind in regard to the matter, and I think it is an unscientific attitude. Because one cannot explain how maternal impressions can be transmitted is surely no reason why one should deny their occurrence altogether ; I maintain there is no question at all that they may be transmitted, and that they are sometimes transmitted (case 4) ; I think it is highly probable this phenomenon occurs more frequently than is generally known, but I do not know why it does not always occur. I suspect there is great variability in the power of transmission ; perhaps the power is dependent on the exact degree of disturbance induced in the mother, perhaps on her receptive capacity ; it would appear that the power of mimicry is similarly variable, and probably for the same reasons.

I am disposed to think that evanescent markings on the child may be due to the transference of maternal impressions by means of reverberations of the nervous system, and that their occurrence has given rise to a belief which has come to include the creation, by the same means, of permanent morphological characters. The latter, however, cannot be explained by means of any laws of which we have cognisance ; still, while the riddle of mimicry remains unsolved, and that it has yet to be solved I find strong reason to believe, one must hesitate to dismiss these ancient and still almost

universal beliefs as pure nonsense because we are ignorant of the means for accounting for them.

There is another aspect of this exceedingly interesting subject. I find that Aristotle recorded the occurrence of marks which were obviously birth-marks, as we understand the term, but he looked upon their appearance on the child as evidence of the inheritance of acquired characters, and apparently had no idea of maternal impressions and birth-marks. For that reason his record of their occurrence is particularly interesting. He says, writing on the subject of heredity:—‘And these opinions are plausibly supported by such evidence as that children are born with a likeness to their parents, not only in congenital but also in acquired characteristics; for before now, when the parents have scars, the children have been born with a mark in the form of the scar in the same place, and there was a case at Chalcedon where the father had a brand on his arm and the letter was marked on the child, only confused and not clearly articulated’ (*De generatione Animalium*, 721 *b* (Platt)).

Such phenomena must have been frequently recorded in those days in order that Aristotle should base his belief of the inheritance of acquired characters thereon.

Hippocrates also believed in the occurrence of the phenomena, and the translator adds in a note that Hippocrates held such inheritance to come direct from the father. His reason for that view is doubtless the fact that the marks appearing on the

child were like similar marks on the father, as distinct from the mother; and here again it is obviously birth-marks which are referred to. I never heard of a case where maternal impressions of a mark on her own body were claimed to be transmitted to the child.

Thus in those days it is clear the appearance of what we call birth-marks was not infrequently observed. But there is special interest attached to these quotations for they obviously suggest the possible relation of such phenomena to the supposed inheritance of acquired characters; they suggest that the occurrence of birth-marks due to maternal impressions is the original source of the common belief in the inheritance of such characters; and if such transference of maternal impressions to the embryo is established, the acquisition of such characters is, though without the aid of heredity, after all rendered possible.

In point of fact, if it be possible for mothers to transmit impressions to the embryo it is possible for acquired characters to be transmitted in the same way. This is not a question, however, on which I can here justifiably embark; I would merely call attention to the relation of these phenomena, to the possibility of such an interpretation as I have suggested, and to couple with it the further suggestion that mimicry in its most primitive form may, in a similar manner, be likewise associated therewith.

That mimicry is not entirely divorced from the

mother's power to transmit impressions seems to me very certain. Analysis of the capacity for mimicry is of great importance. This tendency of animals to assume characteristics which blend with their surroundings is a very striking phenomenon ; is it not certain that the Australian native hunters must have observed it, and is it not probable they have correlated the facts ? If so, the similarity of an animal to a flower or shrub or rock may well have suggested more intimate relationship, and may perhaps have led even to that habit of the man of identifying himself with some external object. But if the habit were so derived, it could not I think be considered as an innate desire, but rather as an expression of an observed natural law, of a law which indicates the powerful influence of environment on the variable properties of growing tissue. Translated into savage thought this would mean a recognition of the ghostly influence of surrounding natural objects, of an influence which is clearly apparent but quite impossible otherwise to explain, and when once conceived such belief might indeed grow to take part in the elaborate ethical system which Dr. Frazer so graphically describes.

While disposed to agree in the main with what I have written in this last paragraph, Dr. Frazer (MS.) impresses upon me the fact that in his opinion 'innate desires' have nothing to do with the matter. That while 'a savage does as a matter of fact (however we may explain it) often believe in his identification with certain natural objects, especially

animals,' 'desire' is not the cause of the belief. 'No doubt,' he says, 'if a man starts with a belief (derived from what his mother tells him) that he is in fact a kangaroo, he may desire for certain practical purposes of magic to strengthen his identity with kangaroos in various ways (as by eating kangaroo flesh), but in this case the desire is not the cause of the belief, on the contrary it is an effect of it, and it is certainly not innate.'

With this conclusion, as I have already shown, I quite agree, but Dr. Frazer adds that he finds the origin of the belief in a primitive theory of conception, and he apparently insists on dissociating therefrom all semblance of innate desire, for he adds, in this connection also, 'there is no question of *desire*.'

I confess I am at a loss to understand this attitude; it certainly appears to me that the theme of conceptional totemism is played upon the string of 'desire,' that 'innate desire' is the impulse which drives the woman to invent an explanation for the fact that the child in her womb is alive, that this is the essence of the theme. I see no other interpretation to be put on Dr. Frazer's book.

I myself, while disagreeing with Dr. Frazer's theory of the origin of totemism still proclaim my belief in the forceful effect of impulse, of 'innate desire,' and seek to show that it is exhibited in the mother's innate hope to obtain from external objects certain qualities which she desires to confer on her offspring. It is precisely for that reason,

because I believe in the power impulse wields over the thoughts and habits of men, that I do not think any theory which fails to admit of innate desire as a motive force can explain the *origin* of totemism.

A man's habit of identifying himself with some external object may, quite possibly, have been stimulated by some such circumstances as I have described above, and may exert great influence on the growth of totemism, but that totemism is derived from such a habit I do not for one moment suggest.

At the same time, the transmission of maternal impressions to her offspring may have borne a part in the growth of the belief that human beings receive qualities from the spirits of surrounding objects.

VII

BIOLOGY AND DR. FRAZER'S THEORY

WHEN stating in chapter II. the problems which it was proposed to examine in this book, I expressed my appreciation of the danger I, as a mere biologist, ran, of stumbling into anthropological pitfalls. I cannot, of course, hope to have succeeded wholly in avoiding traps which are hidden from me, but, with the assistance of Dr. Frazer's criticisms I hope I may have escaped some of the deepest of them.

I am conscious, too, though I have taken some pains to hide the fact, that it may perhaps be considered I am over bold in attempting the task I have set myself, in venturing to differ from Dr. Frazer, from one whose encyclopædic knowledge, whose capacity for infinite care and patience, whose brilliant powers of exposition have rightly caused him to be universally acknowledged as a profound authority on the subject; that in attempting to criticise the reasoned conclusions arrived at by a champion of such renown I am courting disaster. Perhaps I am, but if so, I face the consequences with the more hope because Dr. Frazer himself tells me (MS.), 'I am not at all wedded to my theories of totemism and exogamy.'

Such a frank acknowledgment of possible error by the author of that great work is in itself enough to spur me on ; but I have another incentive, and that is the conviction that all attempts to determine the *origin* of habits, customs, and beliefs which concern the functions of the body must include, and be chiefly guided by, consideration of the biological laws which govern those functions ; and I find reason to think this aspect of the problem has not been sufficiently considered by Dr. Frazer.

In these days of specialisation it is indeed impossible for any man to include in his studies all the branches of science which bear upon the subject with which he is specially concerned ; it is impossible for him to be acquainted with the details of the movement of all the different sections of the army of workers which march on his flanks, which are often separated from him by rugged ridges of intricate thought, or wide deserts through which paths of communication are unknown. But in the face of the common enemy we are all pitted against, the discovery of means of communication between two different sections of our army may prove to be of great importance, and I, in my rôle of a somewhat solitary scout, imagine I have found one of them.

Many years of close attention to the working of the generative system in a variety of animals, to the stimulus which drives it and to the profound effect that most primitive function of reproduction exerts throughout the body, has led me to conclude that

there are few human social problems which are wholly divorced from it. When therefore it became apparent to me that exogamy and totemism were essentially linked up with the reproductive instincts in man, I took advantage of the privilege which science accords to all its disciples and sought to discover how my knowledge of generative physiology could be applied to the problem Dr. Frazer seeks to solve by anthropological methods.

The result of that effort is that I find myself strongly opposed to the conclusion he has arrived at, and it appears to me that our differences are concerned sometimes with the interpretation, sometimes with the disregard of fundamental principles of biology.

In tracing the relationship of a particular custom practised by the North American Indians with a similar custom which prevails amongst the Australian savages, the pure anthropologist is on his own ground ; but in seeking to discover the origin of a custom of vast antiquity now in vogue amongst the most primitive of savages, from whom there is no certain appeal to still more primitive human customs, of whom there is no history, and with whom even other less primitive peoples have but a vague and uncertain connection, his task is a very difficult if not quite impossible one. Whereas in the first instance his knowledge may be used in a comparative sense, in the latter case he has no comparison to guide him. He is on virgin ground. To seek for the origin of that custom by the aid of

phenomena which are produced in accordance with its practice in these days, is to disregard the essential principles of research and is surely apt to lead one into a maze of difficulties ; rather must one endeavour to discover the nature of the elementary stimulus which prompted the most remote ancestors of these savages, and in order to do so one must have recourse to the biological laws which govern the functions of the body, to the effect of environment on function, and to the principles of evolution.

In such manner, it appears to me, biology is intimately concerned with anthropological problems ; on this account it cannot be ignored. I am prepared even to maintain that in tracing the relationship between similar customs practised by widely separate peoples, a more careful attention to the effect of environment on function would lead to conclusions of great importance ; and I am convinced that knowledge of the customs and regulations adopted by savage peoples regarding the breeding of domesticated animals, would shed a flood of light upon some of their most intricate social customs and mating laws. How much more, then, is there need for investigation regarding the effect of environment and the influence of a primitive sexual or generative impulse on these most ancient customs of exogamy and totemism !

It is on such lines that I have worked. I have been led to consider the effect of the primitive impulses which guide the behaviour of men and animals ; and, as these people have never kept

domesticated animals, as they have always been dependent for their life on the wild roots and fruits of the earth and on the products of the chase, I have had regard to the knowledge which long ages of observation must have conferred upon their ancestors, who are primarily responsible for the initiation of these customs, and upon themselves.

When the problems are examined from this point of view one finds ample reason to maintain that both exogamy and totemism have their origin in impulses which were, and still are, generated by the natural laws which govern the activity of the reproductive system, or which accompany the production of offspring. It is in this wise that Dr. Frazer's conclusions and my own clash. He does not include in his studies the working of these natural laws or the power exerted by instinctive sexual impulse. The evidence Westermarck advances on this head he, perhaps justly, discards, and he finds no other exponent thereof worthy of mention.

It is extraordinary how drastic is the effect of neglect of natural laws. From the very first I find myself on a different plane to that on which Dr. Frazer works.

Dr. Frazer is disposed (MS.) to condemn me for disregard of the statements of the eminent observers he quotes in his book. Their testimony, he says, 'is to my mind conclusive, I accept it and regard the reported belief as a fact which I am bound to explain however it may clash with my precon-

ceived notions.' Whereas, he complains, I deliberately reject this testimony 'on purely *a priori* grounds because from your knowledge of civilised men you think it incredible that savages should be so ignorant. Such a rejection of testimony in favour of *a priori* views appears to me unscientific: it would cut at the root of anthropology, the evidence for which rests on such testimony.'

The ground on which I reject the evidence is, he understands, 'That such ignorance of the mechanism of reproduction is inconsistent with the intelligence which these savages display in their social organisation. To this I reply that human nature, among civilised as well as savage men, teems as a matter of fact with such inconsistencies. I suppose that Newton was the greatest scientific genius who ever lived; but he wrote drivelling nonsense about prophecy and the book of Revelations. Faraday, another scientific genius of the first order, was a Sandemanian. A. R. Wallace, Crookes, and Lodge dabble in the nonsense of spiritualism. Mankind from top to bottom is riddled with such inconsistencies, and you would deny this universal privilege of humanity to the poor ignorant savages of Central Australia.'

He then points out 'that the very same men who testify to the ignorance of these savages in sexual matters testify to their comparatively high intelligence in other matters', and he quotes them to show that it is absurdly wrong to underrate the intelligence of the blacks; that their power of conceiving

and executing such social reforms as are implied in the institution of their present marriage system is proof of that. 'Thus on the strength of the testimony of the best observers I believe that the Australians exhibit a combination of gross ignorance on some matters with a considerable degree of intelligence and logical power in others. Thereby I think they merely resemble mankind in every stage from the lowest degree of savagery to the highest degree of civilisation.' And he concludes that to reject observations as to matters of fact because they do not agree with *a priori* ideas of what facts should be deprives conclusions of any value.

Now so far as facts are concerned I do not reject facts at all. I reject Dr. Frazer's definition of what are facts, and I reject his interpretation of some of them. He regards a 'reported belief' as a fact; I have strong reasons for doubting that it represents the whole fact, but I do not for one moment doubt that the report of the belief is correct so far as the report of a savage belief can be correct. Dr. Frazer has apparently misunderstood me; I have no right and certainly no intention of disputing the evidence he brings to show that these savage people say they do not associate the union of the sexes with conception, but I find strong reason to believe that they did know that fact at one period of their history; and this belief is, I think, suggested and supported by certain habits and customs they now practise. I have given some strong evidence to show that a savage is not exempt from the primitive

instincts which induce association of pregnancy and the production of young with sexual intercourse, and that being so, the assertion of the savage that he does not believe it now, is only capable of comprehension on the view that his original knowledge has been swamped by superstition which has been superimposed upon him. To argue thus is not, I conceive, to load these savages unduly with the inconsistencies Dr. Frazer claims it is the privilege of all human beings to evolve. It is in fact just such inconsistencies I claim the right to grant them, though they are different from those Dr. Frazer allows; whereas he claims the inconsistency is due to want of observation and to ignorance of natural laws, I claim that it is prompted by superstition subsequently acquired, which has overridden, swamped actual knowledge of the facts.

Dr. Frazer's position as I understand it is this: these savages deny knowledge of human paternity, therefore they have always been ignorant of that fact, and he seeks to find reason why they should be ignorant. But on what ground does he base his belief of their primitive ignorance? I fail to find any argument throughout his book which shows permanent stability of belief in savages. Read, in his *Natural and Social Morals* (1909), says the customs of the lowest savages undergo change: 'it is reasonable to suppose that in the vast period of their forgotten past, all their customs have altered over and over again', altered with various degrees of willingness amongst individuals, but finally

altered. Custom, he argues, is liable to be narrowed by suspicions, influenced by prejudice, and misled by superstition. In savage minds suspicion and superstition work as does hypnotism when the great body of knowledge is cut off; and in them as in civilised peoples, custom hinders progress, both material progress and progress of thought. This is a highly suggestive generalisation; it indicates not only how difficult it is to trace the origin of a savage custom, but how careful one must be before assuming that any existing savage custom or belief is, in reality, primitive.

In accordance with Read's generalisation, one has confidence in believing that it may be that custom has led to the growth and acceptance of a definite superstition in this particular direction, namely of conceptional totemism; but if so that is not in itself a proof of the persistence to-day of a primitive condition in these savages, nor is it proof of the abrogation of instinct. Custom may in fact demand public acknowledgment of a superstition, and laws may compel one to order one's life in accordance therewith; but the individual still knows better, and I maintain with unshaken conviction that a mother cannot fail to associate the production of a second child with sexual congress, however absolutely she may be obliged to deny that association.

It is I hope clear then that I did not approach this problem with any preconceived notions apart from a firm belief in the power of natural law; and that

the grounds on which I hold my views are not based on my knowledge of civilised man, but on my knowledge of the phenomena of reproduction, on the behaviour of animals during the breeding season, and on the principles of evolution. The mating of animals and of human beings at a certain season, year after year, and the production of young in consequence thereof, are associations which are co-eval with their evolutionary history. For thousands and tens of thousands of years this has been a constant phenomenon, the mating and the production of young being confined to specific seasons; and this is true for human beings as for all the other animals on the face of the earth. Moreover the sexual season has for untold ages been similarly limited to special seasons of the year for human beings as for the lower animals; and the regular growth of the embryo, attended by well-marked and constant changes in the physiological condition of the mother, month by month, from the first month of pregnancy or even earlier, has been experienced by every breeding woman since the human race was qualified to bear that name. The facts which bear on this matter are set forth in my paper on 'The Sexual Season of Mammals,' in the *Quarterly Journal of Microscopical Science*, vol. xliv., 1900, and need not be further referred to here.

Dr. Frazer states 'that the ultimate source of totemism is a savage ignorance of the physical process by which men and animals reproduce their kinds; in particular it is an ignorance of the part

played by the Male in the generation of offspring' (vol. iv. p. 61). The part played by the mother is obvious, but the part played by the father is a matter of inference only, he says, and he thinks there must have been a time in the history of our race when ignorance of paternity was universal among men. But supposing it is a matter of inference only, the inference is so strong that some of the lower animals even anticipate the result of mating. Such anticipation, it may be said, is due to instinct; and suppose it is, is not instinct associated directly or indirectly with the accumulated results of ages of experience? If the lower animals have it on what ground is it to be supposed it is denied to man, and to a race of man whose powers of observation are remarkably acute? It is certain that no isolated woman, deprived of the company of man, ever conceived. When these facts are coupled with the seasonal phenomena to which I have just referred, with the consequences thereof so consistently and so rapidly manifested, and with the fact that we are dealing with beings who have command of speech and who have already, by the habit of preferential mating, shown indications of love, on what ground can sufficient knowledge be denied them? If they know that the pairing season is associated with the production of young in animals they cannot be ignorant of the same consequences in their own case.

In order further to support his claim Dr. Frazer declares that the period of nine months which intervenes between mating and parturition is too long

to allow of these savages to correlate the two facts. But the interval is not a hiatus as he would have us believe ; it is filled with a series of experiences all of which are related to one another, to conception, and to the birth of the child. Even the period between conception and the first movement of the child in the uterus is not a hiatus, as he wrongly assumes ; there are many symptoms which every pregnant animal must be more or less conscious of, which occur during that short time, and they also are all connected with the embryo. If women never had more than one child such knowledge would be passed on to their daughters and gradually a true inference would be drawn ; but some, if not most of them, have several children, and the same series of symptoms invariably occurs, not only to one woman but to every woman, and they are capable and surely desirous of comparing notes with one another on such a matter. It is I think quite impossible for any biologist to believe that a normal human Female who yearly experiences a special sexual season, which is as regularly followed by the same series of changes in body and mind whenever pregnancy occurs, and whose ancestors have experienced the same for countless ages, can be devoid either of the instinct which compels them, or of sufficient reasoning power to induce them to correlate the facts.

Without considering these facts at all, Dr. Frazer assumes it is natural the woman should be ignorant of the part played by the Male in procreation, and

on that quite gratuitous assumption he finds no further difficulty in reconciling their recorded belief in the spirit origin of the child with his theory of the origin of conceptional totemism ; and he goes so far as to say it is unscientific to doubt the evidence recorded ! I will not go so far in criticising him as to use the expressions Dr Frazer uses, I will merely remark that I disagree wholly both with the method of reasoning he employs and with the theory he thereby evolves, and claim the right to look elsewhere for explanation of the woman's declared ignorance of the natural origin of conception. Dr. Frazer thinks their ignorance of the cause of conception has induced their belief in the spirit origin of the child ; my method of reasoning suggests that the impulse which induced their superstitious desire to believe in the spirit origin of the child is the origin of their declared ignorance of the cause of conception ! And, be it noted, that in doing so I am giving these savages credit for more of that inconsistency which Dr. Frazer claims is their due, and for more of that intelligence which he says it is absurdly wrong to underrate, than he does himself.

It may be noted here that none of the instances Dr. Frazer gives of inconsistencies in modern man are due to faulty observation, whereas those he claims for these savages are founded on the complete absence of exercise of their powers of observation ; they are not parallel cases. But if my suggestion is the true one, the Australian savage would still be an intelligent observer while his inconsistency would

compare with that of the Christian belief in the deity of Christ; and indeed I see no other meaning to be attached to such inconsistency. The eminent scientific men to whom he refers as dabbling in the nonsense of spiritualism are actuated by a desire to test the origin of certain phenomena which they, as scientific men, have reason to believe exist. It is wholly gratuitous on Dr. Frazer's part to assume that such work is inconsistent with science, or that the phenomena are necessarily nonsense. So long as such inquiry is based on endeavour to discover the mechanism by means of which certain observed phenomena are produced, it cannot be condemned as unscientific.

Thus I do not reject the testimony of the observers whose good faith Dr. Frazer, quite unnecessarily, upholds to me, I am no less convinced than is he of the truth of their testimony; but I reject Dr. Frazer's interpretation of the meaning to be attached to the phenomena they have observed, and if in doing so I 'cut at the root of anthropology,' I venture to think that tree would benefit from some root-pruning. Instead of supposing with Dr. Frazer that the ignorance of the facts asserted by these savages to-day is evidence of their primitive ignorance of the truth, I claim it is much more probable that their customs, their beliefs, their superstitions, their system of ethics if you will, oblige them to deny knowledge of it; that by such means there has been created what appears to them to be a higher belief, a belief which it is now impious for them to

question, a belief in the potency of spirits which govern and overwhelm their own efforts. Belief in the existence of spirits must indeed have been a great advance in the evolution of man and must exercise enormous influence on every branch of his life. When once such belief was established, then to deny the power of the spirits would doubtless be deemed by them a very dangerous experiment, and for that reason they will assert their belief in spirit influence and power. Do not the rest of mankind exhibit similar inconsistencies and are savages different from other human beings in this respect? Dr. Frazer himself claims that they are not different.

Suppose these same observers whom Dr. Frazer quotes, being ignorant of our own religion, should set themselves the task of discovering what is the origin of the Christian belief in Europe regarding the immaculate conception. In some parts, where the most ignorant peoples live, they would find a universal acknowledgment of that belief, in others they would find some scepticism; just as in different parts of Australia there is variation in the completeness of the belief those peoples are credited with. I should not doubt the truth of statements made to that effect by such observers, but should I be justified in arguing that because there was a firm belief in the immaculate conception amongst the most ignorant Europeans that therefore this was their primitive belief? If I did so argue I should be wrong for there was an anti-Christian period, and belief in the immaculate conception arose after

the birth of Christ. Moreover, supposing the people throughout this country were asked the question, how many would proclaim their belief although they do not really believe? How are you to determine with accuracy the depth and extent of a belief of this kind? A large number of people who say they believe say so not because they do believe but because they dare not deny belief. And if that is the result of superstition on a civilised people how much more will it drive savages thus to act? I see no reason why we should not anticipate a precisely similar condition in Australia about spirit conception; that there was, in fact, an earlier period in their history when they had no illusion on the subject; that spirit conception was invented to supply a want, and that it subsequently became a great power.

It may be argued that the force of superstition being stronger with these savages, they will have the greater stimulus for firm belief in it; but even so, that does not destroy the fact that before the superstition arose they knew the truth. In North Queensland, as we have seen, there is evidence of the limitation of the superstition; it is there held to be true only for human beings, and there is evidence that the reason why it is held is associated with the desire to confirm their superiority over the lower animals. The motive is not dissimilar from that which actuates many who declare their belief in the immaculate conception; although it surely arose from a conviction in Christ's direct relation-

ship with the Deity, its effect has been to ensure the establishment of his complete superiority over the rest of mankind.

It may perfectly well be that this savage belief in spirit conception was invented for the purpose of establishing increased importance of some individual, that such is probably the origin of all examples of this superstition. The fact that the water of a certain river, or the flower of a certain plant, or what not, is believed to have the power of fertilising *any* woman, would doubtless be due to the extension of the superstition. The appearance of this superstition in different parts of the world is certainly indicative of the similarity of its origin, but such similarity does not prove that primitive ignorance of the fact of paternity was universal. As a matter of fact we know that ignorance of the part played by the Male in breeding is not universal amongst primitive peoples, while the belief in the power of spirits would seem to be almost universal, and the idea of human supremacy is ingrained in the human mind.

It has been impressed upon me that the duty of the anthropologist is to accept nothing but what he gains from actual experience of savage beliefs and habits and customs; he must not use his deductive powers. But how can that attitude be justified in face of the fact that it is the origin of those beliefs and habits and customs we are investigating, in face of the fact that such must have arisen under conditions which are different from those which now exist, and with the certain knowledge

that experience of present conditions alone is not sufficient to enable us to imagine, however vaguely, even the outline of the vanished past? Surely it must be that in any attempt to solve our problems we are compelled to use comparative methods, that in order to gain any true perception of the working of the ancestral savage mind we *must* use our deductive powers.

I have attempted to compare the primitive impulses of the ancestral savage with those of the lower animals and with those we still possess; power to compare their superstitions is more limited, but at least we may have confidence in the overwhelming influence they exerted. There is no more permanent legacy of the savage mind existing in us to-day than that which is demonstrated by our inability to overcome superstition, an inability which persists in innumerable instances in spite even of our knowledge that it is only superstition. We continue to-day to hoodwink ourselves and we do so in spite of the fact that we know the truth. I maintain we have justification for deducing the existence of a similar mental process in the savage mind, and that we may with justice suppose they deceive themselves (and also deceive us) even more completely, more successfully, than we ourselves do. The fact that they do so may account for existing beliefs, but after all they are but transient, there is no fixity about them; indeed they must always be subject to individual analysis even by such limited critical power as savages possess. The mind that is capable

of evolving them is capable also of questioning their truth.

Mr. A. E. Crawley remarks, in a brief notice of *The Golden Bough*, part v., in *Nature*, 19th September 1912: 'After all, this rich crop of myth, ritual, and religion, so carefully harvested in *The Golden Bough* is but the chaff of man's imagination however persuaded he may be that it is golden grain. For the true seeds of the mind are scientific; during countless ages they were garnered in absolute unconsciousness, fancy playing meanwhile with the flying chaff. The mistake of regarding these recurrent and multitudinous expressions of man's mental "play" as the foundation of his individual and social achievements will not be made by the synthetic sociologist of the future.'

If, therefore, in discussing the origin of the custom, one must not rest content with what we see of these savages in their present state of development; if at the time of that origin, in accordance with the laws of evolution, their intelligence was appreciably lower than it now is; and if the power of observation precedes the exercise of intelligence; then we are justified in questioning Dr. Frazer's treatment of conceptional totemism, for he denies the premises, with the effect that the order of observation and intelligence is reversed. I think the attitude he adopts is due to the fact that he neglects the power of natural laws and the effect of primitive impulse. If I am right, it is clear that the 'reported belief' is not a fact which Dr. Frazer is bound to accept,

as it stands, in favour of his assumption that primitive man was ignorant of the origin of conception ; nor can the recorders of these facts take exception to any other interpretation which may be put upon them.

So far as exogamy is concerned, I have urged that, in accordance with the laws which govern the sexual impulse, it is the most primitive of all instincts associated with breeding, that it emanates from the sexual requirements of the Male at a time when the primitive family or clan was composed of a comparatively small number of persons, and that such sexual cravings are normal impulses common to all Male animals under similar conditions ; as witness, for instance, the behaviour of a buck rabbit which has lived for long with certain does, on the introduction of a strange Female.

But if this evidence, derived from consideration of biological laws, is right, the whole history of the relation of exogamy to totemism, as enunciated by Dr. Frazer, requires revision. To argue that such a fundamental sexual matter is derived from the horror of incest is thus shown to be absurd, for the habit of exogamy must have existed long before incest was thought of, while its origin is not even due to the habit of exogamy itself, but to the natural physiological laws which induce the habit. Thus it must follow that the horror of incest, in so far as it exists, probably emanates from sentiments and superstitions which became evolved in consequence of the segregation of a people into clans, and is

certainly associated with totemism. In this case it is a comparatively modern sentiment, and the laws made to ensure respect for the sentiment are comparatively modern laws, designed, I apprehend, essentially to consolidate totemism. The fact that these laws affect the present custom of exogamy has nothing whatever to do with its origin. In spite of all laws, the exogamous impulse remains and is constantly indulged surreptitiously, and such mating may or may not be incestuous.

In the same way, if the biological argument concerning exogamy is true, we must conclude that totemism, although of great antiquity, is of more recent origin, for it is obvious that if totemism was older than exogamy, then the Female theory of conception without the aid of the Male must have preceded the primitive sexual instinct of the Male; and such a theory seems to me quite untenable. Moreover it is quite clear from Dr. Frazer's evidence that conceptional totemism could not have arisen prior to the initiation of spirit worship. Here again therefore, the biological evidence is in profound disagreement with Dr. Frazer's conclusions.

It is again advisable to remark here that it would seem probable Dr. Frazer has been influenced in his judgment by confusion of the origin of exogamy with the development of the laws which enforce it. Previous observers, I understand, expressed the opinion that totemism preceded exogamy, and I suspect they were perfectly right in thinking so if by exogamy they meant the regulations which now

limit the choice of the Male for his mate. But Dr. Frazer is concerned with the origin of the custom, which is quite another matter, and I suspect it is his preconceived notion of the priority of totemism which is largely responsible for his view regarding the origin of that custom. If totemism was initiated before the primitive instincts of the Male induced exogamous habits, the date of its conception must be thrust back to a time before any form of human communal society existed, and it is, I understand, doubtful if such a state ever did occur in the history of man.

There is one other criticism which Dr. Frazer makes (MS.) to which I will refer ; it illustrates what I have just written regarding his confusion of the origin of these customs with their subsequent development, and shows that in his endeavour to make full allowance for the intelligence, deliberation, and will of savage people, he has neglected the power of natural law ; for these reasons it also shows clearly the nature of the differences which exist between us. It appears he understands that I claim 'that while men naturally go abroad for their women and lay no restriction on their sexual appetites, women are jealous of the exercise of this freedom and restrict it by certain rules, which take the form of exogamous prohibitions. But if that was so, it was surely the women and not the men who instituted exogamy. The essence of exogamy is the prohibition to have intercourse with certain classes of women ; and according to you (if I under-

stand you aright) these prohibitions were introduced by women not by men. The true origin of exogamy would thus (according to you) be not the roving inclinations of the men, but the jealousy of the women at home, which jealousy took the truly extraordinary form of prohibiting their men under pain of death from having intercourse with themselves and obliging them (if they valued their lives) to have intercourse with other women.'

In this quotation I would observe that Dr. Frazer assumes I suggest that women restrict men's freedom to rove by certain rules, because he supposes I claim that women are responsible for these rules. Now the only way in which I can be supposed to make such claim is on the supposition that it is totemic rules he is referring to, and that in deriving totemism from a Feminine idea I make the women responsible for all its development. This misunderstanding may be due to insufficient explanation on my part in the draft I sent him, if so I hope I have remedied the defect in the previous pages and clearly shown that while I agree with Dr. Frazer in crediting women with the initiation of totemism I fully recognise that the elaboration of its laws is not solely her work. In accordance with the scheme I have suggested in the earlier part of this book therefore, the cause of the prohibition laid upon men against intercourse with women at home is not due to jealousy of those women, but to totemic or other laws evolved with the aid of man, if not solely by him.

But this is not the main interest of the quotation ; it lies in the remark, ' The essence of exogamy is the prohibition to have intercourse with certain classes of women.' Now what does he mean by the essence of exogamy ? He surely must mean the essence of that practice of exogamy which now exists and which has been evolved in consequence of its inclusion in totemism, or in consequence of the segregation of a people into families or clans by some other means. He seems here to have entirely forgotten that the point at issue is the origin of the custom, and that my remarks which he criticises are primarily concerned with that origin and not at all with the development of the custom. It seems clear to me this confusion is due to the fact that, deriving exogamy as he does from the horror of incest, that is, from a sentiment which could only have arisen in consequence of the definite segregation of a people into clans by some means, he has superimposed his own scheme upon my argument, which he is here criticising.

As I understand the matter, the essence of exogamy is not the prohibition to have intercourse with certain classes of women ; the primitive exogamous habit is under no prohibitions, under no human laws. Such limitations to sexual intercourse are due to laws which man has made and which Dr. Frazer calls exogamy, and they are the means whereby such limitations are assured ; but the exogamous habit itself, the impulse which induces exogamy is subject to no such limitations, only under the influence of

totemism, or to a clan system otherwise devised, is it so limited.

Dr. Frazer has made it clear that conditions may exist which allow of the free exercise of the exogamous habit in spite of the presence of totemism. I interpret this to mean that although totemism has chained the errant Male, and limited his excursions in search of a mate by law to certain districts or to definite families or clans, he may break these bonds and, in spite of totemic law, reassume his primitive freedom to choose his mate from wheresoever he pleases. And this is clear evidence of the independent origin of the exogamous habit, clear evidence that it is governed by natural law. How Dr. Frazer finds justification for the conclusion that I derive exogamy from the jealousy of women it is difficult for me to understand.

Totemism on the other hand, is not a natural law ; it is essentially of human origin, and quite possibly the outcome of the Feminine idea of spirit conception, though it seems probable that it was not the actual life of the child but some of its special qualities which were originally supposed to be so derived. But because totemism had its origin in this Feminine idea, that is no proof that its development was wholly due to women, and such is certainly not my contention.

The fact that men are prohibited from intercourse with women of certain totems is not any evidence that such prohibition is due to jealousy on the part of their women at home. The women at home may

prefer, probably do prefer to mate with foreign men, just as the men prefer foreign women; the prohibitions under pain of death may have been jointly evolved by Male and Female, or one sex may be more responsible for the law than another, or it may be entirely due to one sex. It is certain that such development of totemic law has nothing whatever to do with the origin of exogamy, and arguments of this nature are, in my opinion, wholly inadmissible.

Such, very briefly, is the result of my application of certain biological laws to the problems before us; it seems to me that a fertile field of inquiry is thus opened, and though I have not attempted to do more than touch a narrow portion of the fringe of the subject, I hope I have done enough to indicate the broader lines on which such inquiry could, with great advantage, be conducted.

VIII

PRIMITIVE AND MODERN SEX ANTAGONISM

WE have here examined certain phenomena, some of which emanate from the Male others from the Female sex, which are essentially sex phenomena, and it has been shown that they concern impulses and instincts which are strongly opposed to one another. The origin of exogamy is to be found in the instinctive sexual impulse of the Male to find a mate who will stimulate him sexually and ensure for him the greatest amount of sexual gratification. It is the performance of the sexual act which is of chief moment to the Male in his rôle as a breeder, and it is this which his instincts demand he should perform; with the result of that act he is not, in his primitive state, called upon to concern himself. Totemism on the other hand may be considered as a Feminine creation which has special relation to maternity; for to a woman it is the result of the sexual act which is of peculiar importance, not the act itself. For her the sexual act is a necessary performance to ensure maternity, and only as such is it of moment to her; her instincts and impulses relate to the production of offspring

and the care of them, and it is for such purposes she is organised.

Thus the Male and Female are complementary ; they are in no sense the same and in no sense equal to one another ; the accurate adjustment of society depends upon proper observance of this fact.

The need for such adjustment of sex relations is frequent, for society is not stable ; it cannot be so for it is influenced by an ever-changing environment, and environment compels the adaptation of all living things to the conditions it lays down, they are all subject to its influence. Moreover, variation in the environment stimulates change in one direction more than in another, and it affects one living thing differently or to a different degree to what it affects another whose organisation is different. Consequently there is continual need for readjustment of the relations of the complementary parts of a community of human beings, and such readjustment affects the customs which long habit has established and disturbs the relationships which may, during an interval of comparative stability, have come to be recognised as permanent.

It has also already been shown that the habits and customs which are derived from primitive sex instincts vary in accordance with the environment, and that a marked effect of such variation is the stimulation accorded to, and the eventual consolidation of, either a habit due to Male influence or a habit due to Female influence, one or the other. That is to say, there is, in primitive times, evidence

of variability in the degree of dominance of either sex under different environmental conditions.

The element of disturbance of the relations of the complementary parts of a society, as it impinges upon sentient human beings, is accompanied by mental unrest, and where the origin of that disturbance is not recognised antagonism is engendered towards any object which appears to be the cause of it; we may even go further and assert with some confidence that although the origin of the disturbance may be recognised as due to some law of nature, antagonism may, and probably will be engendered against an object which is the visible agent through which disturbance is effected, particularly if that object can appreciate the effect of active antagonism. It is, in fact, just such unreasonable rebellion against natural law which is the most fertile source of social unrest, even social warfare, for there can be no question that unrest is usually accompanied by more or less bitter class antagonism. When therefore the two classes concerned are the two sexes, it is sex antagonism which is thus created.

‘Sex antagonism’ may appear to some of us to be an exaggerated expression; we may speak of differences of opinion, they will say, but to call them antagonistic is to imbue these differences with qualities which engender strife, which make strife indeed a necessity. Those of us who refuse to face facts are likely to deny that actual strife between the sexes, as such, exists at all; we are prone to believe that such small variations in opinion as exist

from time to time are to be adjusted with ease ; just a little give and take on either side and the matter is finished, they say. And there is some apparent truth in this view at first sight, for such differences are generally exceedingly slight when first they come to the fore ; they then concern only a small proportion of the inhabitants of a country, the interest of the people at large is not arrested, the matter does not surely concern them and they are busy with other things. It is but the few who recognise the real cause of unrest, the real trend of opinion which prompts any slight movement.

Customs and habits are altered infinitely slowly as a rule, with various degrees of willingness amongst individuals, as Read wisely remarks ; they pass almost unnoticed until, if the change be consistent for a sufficient length of time, one day it is discovered that a great stride has been made. Then the matter is brought home to a larger proportion of the people, and those who have not already participated in the movement find themselves subject to immediate drastic change ; for it is then too late to devise means whereby the old regime can be re-established, besides, many have insensibly become accustomed to the new order ; it is easier for them to keep it than to root it out, and perhaps, after all, it is or may become a good thing. There follows another long interval of apparent rest during which some other insidious change creeps along or the same one is still further advanced, succeeded by another awakening ; and so the world suffers progress, as it is called, though

the change in itself is really nothing more than readjustment to a changed environment, and, as everybody knows, progress is dependent solely on the conformity of that readjustment with natural law. Thus it is with variation in a people as a whole.

But strict class variation, *inter se*, is accompanied by more startling effects, for then the infinitely slight differences which initiate the change are to be seen by very few outside that class, and the world at large knows nothing of them until they are suddenly burst upon them collectively as a great movement. A class variation of this kind must pass through its earlier stages secretly, and such secret movement is only possible where a class, or a powerful section of that class is specially capable of isolation. Between different classes of men such secret variation is rare, for men's impulses, instincts, and organisation are much the same in all classes and are similarly affected by environment. But woman is constitutionally quite different from man, so different that no man may justly claim properly and completely to understand any woman, at any time, or under any circumstances. For this reason the gradual march of variability in woman is sure to pass almost unnoticed by man until, suddenly, he finds his own convenience, or the performance of his normal functions and consequently his health, radically interfered with in consequence thereof. For, be it remembered, an environment which favours variations in the woman's habits and desires has not the same effect on the man; moreover it

has not necessarily, and in fact probably rarely has a correlative effect on him ; for instance, the influence which results in lessened breeding power of women does not induce decreased sexuality among men and so balance matters.

It is important that this fact should be clearly understood, and also the fact that the exactly opposite effect may be produced ; indeed, we have irrefutable evidence of the truth of this. Thus, increase of luxury tends to reduce both the inclination to breed and the power of producing offspring among women, while it increases the sexual activity of man. I have already pointed out that such is the case both among the savages of Australia and our own people, and that domesticated animals are subject to the same laws. This is a conspicuous example of radical difference in the organisation of the two sexes ; it is also an example of similarity of effect of environment on the same sex among widely separated peoples living under quite different circumstances, and also on the same sex in very different species of animals.

Again, we have indication that among the Australian savages poverty and hardship act differently on the two sexes, for we find that among tribes which are so circumstanced totemism does not enforce restraint on the errant Male, his exogamous instincts are not interfered with, the woman does not show that jealousy which Dr. Frazer suggests that I attribute to women when totemic law is strictly enforced. Such comparison is confirmed by what we know of domesticated animals ; in their case

hardship tends to delay and to reduce the breeding capacity of the Female to a much greater extent than it delays and reduces the sexual activity of the Male ; while comparison with civilised women who are much overworked shows that the strain of child-bearing affects them far more than the sexual activity of the Male is affected under similar circumstances.

In both these cases the result is what a student of generative physiology would expect. Hardship and strain of any system of organs in the woman checks the functional activity of those organs which enable her to store nutriment for the embryo, and an inefficient supply of stored energy interferes both with her sexual activity and her ability to withstand the strain of maternity. And it does more than this : hardship and strain causes a flow of energy to the organs so exerted, and prevents its flow to those parts of the body where it should be stored. On the other hand, the woman who lives a life of luxury loses both her sexual activity and her power of reproduction for quite other reasons. One of these undoubtedly is that she stores an excess of food material in the shape of fat which invests the ovaries and probably the ovum also. It is for this reason that stock of various species, when fattened for show purposes, are constantly found to be sterile for some time afterwards, until, in fact, they have been sufficiently starved to oblige them to absorb all excess of fat ; and it is not uncommon to find that Female show animals never do regain their

full breeding vigour, while some may be permanently sterile. In woman no doubt there are also other reasons, such as certain disturbances of the nervous and digestive systems, or the excessive stimulation of certain other organs, which seem to destroy the normal functional capacity of their generative organs. The whole matter is exceedingly complicated; it is of great interest and importance but is little understood, I can only say here that the factors which affect the breeding power of woman are very delicately balanced, and that disturbance of them may readily cause temporary and often induce permanent breeding incapacity.

I may, perhaps, give one example of interference with the Female's power of reproduction, since it bears somewhat closely on modern conditions of society. I have observed in certain Female animals (rabbit), that long cessation from the exercise of the generative system induces degeneration of the ovarian ova, not only of the riper ova but of ova in all stages of development, and such degeneration may be so complete that sterility is thus caused. The reason for this appears to be either that the ovary ceases to be supplied with nutriment or ceases to make use of what is supplied, or that the elaboration or disposition of the internal secretion of the ovary is interfered with because that organ is not exercised; and it seems probable that the ovary may lose its capacity for producing ova altogether, for permanent sterility may supervene. At the same time these animals are still subject to

seasonal influences, they do not entirely lose their sexual activity.

So much for the Female ; with the Male it is quite otherwise. An over-fattened ram or bull undoubtedly loses his normal reproductive vigour temporarily, but under proper treatment he rapidly regains it and I have never heard of a case where he completely loses it permanently from this cause. In the same way long abstention from reproductive activity in man may induce reduced sexual vigour after a certain age, but it does not destroy his reproductive power. Again, luxury stimulates a virile man's sexual activity ; and very hard work or overstrain, although it may induce temporary cessation of that activity and generally does so, is commonly followed by a specially active condition of the generative organs very shortly after such overstrain is stopped. He then experiences a rebound as it were, and that is symptomatic of the virile man. The delicate man is, of course, more drastically affected in these matters than is a virile member of the sex, and in this respect approaches the normal Feminine organisation ; with him the rebound is much slower, much slighter in degree, or may not occur at all.

Various other examples might be given which show the radical difference between sexual and generative activity in men and women, and the variable effect of environment and of the changes in environment, upon them. But the above are sufficient for my purpose here ; they prove without any doubt that social habits, customs, and laws which

are favourable to the comfort and well-being of a woman under any particular environmental condition, cannot be enforced on her mate, if he acts purely as such, without causing him grave discomfort and eventually damage to his health and powers.

Sound health is, of course, of paramount importance to the individual and to the nation; it is unnecessary to add a word on that head; the quantity and quality of our work, the quality of our offspring, and our capacity for competition with other nations, is determined by our health. It is then of great moment to observe that the laws which govern the natural discharge of the generative functions cannot be infringed without causing derangement throughout the body, and that this fact is true for both men and women. That is to say, it is certain that if a woman is not in a condition favourable for breeding she should not breed, and that a man whose generative impulse is strong should not be compelled to suppress it: violation of either of these rules will result in derangement throughout the body. Although a woman under the above conditions may rear children, she will thereby lay up for herself lasting ill-health; and although such a man may switch off his generative energy to other organs for a time, he will suffer from overstrain of those organs eventually, because they have been unduly stimulated and because they have not been given proper time in which to recuperate from strain by diversion of energy from them.

The whole of this matter is intimately concerned with the various functions of the generative glands. The subject cannot be discussed here; it must suffice to say that the production of generative cells is only one of those functions, and that upon the regular production of these cells and upon their regular discharge, depends the proper performance of the other functions of the glands, and, by that means, the healthy condition of the whole of the rest of the body.

It follows that in order to exist to the best advantage, in order to do the best work and retain a properly balanced condition of body and mind, each organ of the body must be worked to its normal capacity; failure to do this must result in abnormality in one or another direction. And this is true for both men and women.

It cannot be a matter for surprise therefore, that Nature's requirements should cause trouble in any artificial society; that the environment produced by the habits, customs, and laws of such society should affect the man and woman differently; and that the necessities of each of them should create demands which are in principle antagonistic to the laws of such society. When sex laws remain rigid in spite of change of environment, while society becomes more and more complicated and the life led by its members more purely artificial, the probability of the growth of drastic sex antagonism is vastly increased, becomes indeed a certainty.

Dr. Frazer's book, as I interpret the evidence

recorded there, contains many examples of such warfare, and it is equally clear that the present woman's movement has its origin in sex antagonism. No matter what each of the various sections of that movement declares, no matter what is the avowed object of the actions of any one of them, it is obvious that the driving force is engendered by desire to alter the laws which regulate the relations, and therefore the relative power, of the sexes. But the origin of the dissatisfaction with these laws is not, in my opinion, the fact that difference exists in the kind of power wielded by one sex as compared with that at the disposal of the other, but the fact that sex laws have remained rigid in spite of change in environment; it is this neglect of Nature's laws which inevitably results in sex antagonism, and any faulty disposition of power between the sexes is the result of that neglect.

There is one other fact which brings the attitude of the woman of to-day into close accord with those savage women Dr. Frazer treats of. To-day woman is fighting independently of man: she is conducting her own war. This is a somewhat rare phase in civilised woman so far as I know; we have long been accustomed to her methods of using influence with politicians, and especially with the Church, but to-day she has thrown aside both of these old-fashioned aids; she feels strong enough to fight alone. In this respect she is reverting to a primitive condition, and there is hardly room for surprise that she should do so, for the war is a sex war and the

problems of sex are, after those which relate to food, the most primitive of all problems. The association is undeniable, the degree of dominance of her primitive sex instincts is in question, it is an elemental matter to her; and she is fighting in a primitive fashion also, for sex battles among the Australian savages were commonly conducted with the aid of clubs. Surely Dr. Frazer's book is illuminating in more directions than I think he had reason to expect.

There is however one great difference between the sex wars depicted in Dr. Frazer's book and that which we are now experiencing. In the former, antagonism apparently existed between the sexes as a whole, while in the latter the Female army is largely composed of a particular class of woman. The difference is probably due to the much more variable conditions of life experienced by the members of a dense population, and also to the greater plasticity of civilised individuals. But it is an important difference and one which is of essential biological interest to the nation.

A probable result of the success of the present movement, one which I fancy is not generally recognised, is the risk of intra-sexual strife in consequence of the risk of thralldom which one class of woman, and that one the most important class, would thereby run. The authority and power hitherto held by the mothers of the nation would be largely usurped by spinsters, and such a drastic change would be of vital importance to the race.

Although there are many married women enrolled amongst the suffragist party, women who would embrace the cause of any who are unhappy or needing help, the bulk of those who take an active part in the movement are undoubtedly spinsters ; a dissatisfied and, we may assume, an unsatisfied class of women.

Students of social habits usually associate abnormal sexual activity with weak intellect, and it seems certain that women of weak intellect are the most prolific, as a class, in these days. But, although it is not generally recognised, the study of generative physiology also indicates that mental derangement is associated with degeneration of the functional capacity of the generative organs, a view with which my friend Dr. Mott is in substantial agreement, and, as I have already shown, such degeneration in its turn is associated with disuse ; thus the risk run by the elderly spinster who consistently indulges in violent and unrestrained excitement, is a real one. Here is another example of the influence exerted by the generative system on other organs of the body, of the law which compels due observance of the demands made by that system in order to acquire balance and to maintain stability, and of the pathological condition which results from disregard of that law.

Should extended political power be granted to women it seems certain that those who will exercise that power most freely are the women of this class, and, if their present behaviour is any criterion of

the ultimate use they will make of that power, it is also certain they will exercise it chiefly for their own advantage. The study I have presented in the foregoing pages is strong confirmation of such conclusion. Thus extended power given to women threatens to result in legislation for the advantage of that relatively small class of spinsters who are in reality but a superfluous portion of the population ; and since their interests are directly antagonistic to the interests of the woman who is concerned in the production of children, legislation enacted on their behalf will tend to be opposed to the interests of the mothers themselves.

Those of us who are strongly in favour of gaining assistance from women who are qualified to give it, may well be drastically opposed to the claims made by those who are responsible for the present agitation ; for we are thus confronted with the probability, that extended power given to women will result in the waste products of our Female population gaining power to order the habits and regulate the work of those women who are of real value to us as a nation.

An example of the use now made by such dissatisfied women of their ability to influence ignorant young women, is to be found in the literature freely exposed for sale in various parts of London. It is difficult for a scientific man to refer with equanimity to the gross inaccuracies which permeate the arguments set forth in these books and pamphlets, and it is impossible to gauge the extent of the harmful

effects thus produced on the minds of young girls, for whose edification these books are avowedly written. To take one instance only of the perverted reasoning commonly exhibited in such literature ; man, as a sex, is held up to execration as ‘ the brute beast ’, marriage is vehemently discouraged and condemned, and, human nature being what it is, illicit temporary unions which infallibly lead to prostitution, amongst the class of girls who chiefly reads it, are thereby forcibly encouraged. I do not of course suggest that the authors themselves recognise the evil they are propagating, but nevertheless such must be the tendency of teaching which is in effect mainly pathological, on the bulk of those who greedily absorb it. The philosopher may content himself with the reflection that the pernicious nature of such teaching will eventually result in knowledge of the truth, but he can hardly avoid the conclusion that knowledge can only thus be gained by experience which will entail great misery to many.

It must be understood that the foregoing remarks refer to my interpretation of the general tendencies of a special class of women, as a whole. A great variety of circumstances may, and constantly do act on individuals so as to counteract these tendencies, but I hold that it is necessary to provide such special means in order to ensure stability in this class, for the following reasons.

A normal woman is physiologically constituted to bear children and to rear them, and her neglect to perform the functions of motherhood results in

derangement of the normal functional condition of all those systems of organs which are controlled or in any way affected by the generative system. This matter has already been referred to, and the immense range of influence embraced by the generative system has already been shown ; thus any derangement of this one system tends to induce pathological conditions throughout the body, and all spinsters run this risk. But when, in addition to the derangement incident to the non-performance of these natural functions of woman, is added an abnormal stimulation of some other system of organs, the risk of disorganisation of the latter system is greatly increased. For this reason it appears certain that repeated stimulation of exaggerated sentiment, constantly resulting in volcanic upheavals thereof, or any conditions which incite indulgence in long-sustained, abnormal strain of nervous tissue, induces weakness which is likely to lead to serious derangement of that tissue, especially in the brain. To such pathological conditions the Female sex is peculiarly liable ; the mental disturbance frequently experienced during the menopause is commonly to be traced to one or other of these causes, and woman clearly has, what may be designated as a predisposition to nervous derangements as a consequence of disturbance of generative function.

In order that a woman should escape such evils she must lead a life which is in accord with her physiological organisation, and she must do this not only when she arrives at mature womanhood

but also during adolescence, for it is then she is laying the foundation for the acquisition of power to perform the normal functions of the adult fertile woman. Thus the regulation of the life led by young girls is of enormous importance to the race ;—and on this head I would venture to add a few words.

It is comparatively easy to inculcate a physiological habit in the young, but when once established it is extremely difficult to alter. If a shower of rain falls upon a smooth-faced, rounded hill, the water does not run down all over the face of that hill, but down winding channels which are formed in accordance with the variable nature of the substances of which that hill is composed. And, as shower after shower falls, those channels deepen and widen, and in course of time become established as natural permanent conduits which will require much labour to close effectually. If however, from the first, you drain that hill by conduits artificially made, without regard to the natural course of drainage, that natural course will never be assumed ; even if the conduits be stopped up they have already, in many places, cut through and destroyed the natural water channels.

In the same way, during adolescence the natural habit of a girl's functions leads her to develop her power to store nutriment, and to develop various organs of her body which are designed to function as sources of nourishment for the children she ought to bear, both during the life of the embryo in the uterus and during the nursing period which follows

pregnancy. If a girl be properly treated during adolescence, the physiological habit which is necessary in order that she may develop into a satisfactory mother, will be established in the majority of cases ; and it is such women the race demands for its permanence. This physiological habit entails the natural flow of nourishment along particular channels to special sites in the body, and is comparable to the natural channels whereby water finds its way down a hill-side. But if, by artificial means, this natural flow of nourishment be diverted to other tissues and other organs ; that is to say, if the girl during adolescence be called upon to perform a variety of strenuous duties which cause a marked waste of tissue in other organs of the body, and a marked drain of nourishment to those organs in order to renovate that waste tissue ; then the physiological habit which is essential for the proper discharge of a woman's functions is interfered with.

By such means the natural flow of nourishment is diverted at an age when any such interference is likely permanently to injure her normal power to produce and to rear children, and is calculated to induce undue strain on organs which, unlike the same organs in a man, are not designed permanently to bear it.

It is for such reasons I hold that overwork in girls' schools, strenuous exertion at games, and the muscular training which is essential in order that athletic competitions may be performed, is radically bad for girls during the period of adolescence. It

is by such means that their energy is diverted from its normal channels at a critical time of life, and it seems certain that in a large number of cases that normal course is never afterwards properly established. A physiological habit contracted in youth is extremely hard to alter. Here again Dr. Mott is in agreement with me, he is also 'of opinion that young women during adolescence are unfitted for motherhood by excessive mental and physical stress', and that the storing of nutriment is what is needful for girls in adolescence; he further suggests that sports and games tend to develop the secondary Male characters which are latent in the Female sex. With this latter suggestion I also agree and am disposed to attribute a large share of those militant qualities, with which we are now so familiar, to the perversion of the energy which should be expended in carrying on the normal functions of the Female generative system.

It seems clear that a woman's usefulness, her value to society, and therefore her power and her happiness depend, not on her likeness to but on her dissimilarity from man. By training her recessive male qualities she can never attain to more than a secondary position in the social body; but by cultivating her dominant female qualities, by increasing their value, she will gain power which no man can usurp, and will attain that position as a true complement of man which is essential for the permanence of the vigour of the race.

It may be further noted that it is also conceivable

that the production of effeminate Males is associated with the stimulation of Male characteristics in the mother. If so the generation which follows may probably reap unexpected benefit, for it is well known that a bull with marked Feminine characteristics is often found to be specially capable of producing fertile heifers with ample milking capacities, and which will in their turn produce Masculine bulls. By such means Nature may be trusted eventually to retrieve her errors ; in the meantime I judge we should be wise to avoid placing undue power in the hands of any section of the community whose habits or whose tastes incline them to acquire pathological characteristics.

Finally I would suggest that what is perhaps the most remarkable fact in connection with the modern woman's revolt is not the activity of the dissatisfied woman so much as the complacency of the dissatisfied man. Both sexes have ample cause for objection to existing conditions ; both desire a change, or at least both may benefit from a change. The present sex laws weigh as heavily, if not much more heavily on men than on women, and for the benefit of the race it is to be hoped that, when the change so confidently expected does come about, this fact will not be lost sight of. For the present the man is very patient with his woman-kind, and is remarkably silent concerning the discomforts he himself is subject to ; perhaps for these very reasons he will act with all the more force when the proper time comes for action.

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